

AMERICAN ARTISAN and Hardware Record

Vol. 87. No. 5. 620 SOUTH MICHIGAN AVENUE, CHICAGO, FEBRUARY 2, 1924. \$2.00 Per Year.

*Be
an
American
dealer!*

SELL a furnace that stands up against any use or test—a furnace that does away with competition.

We have a very successful method of helping our dealers to secure the bulk of the business in their territory.

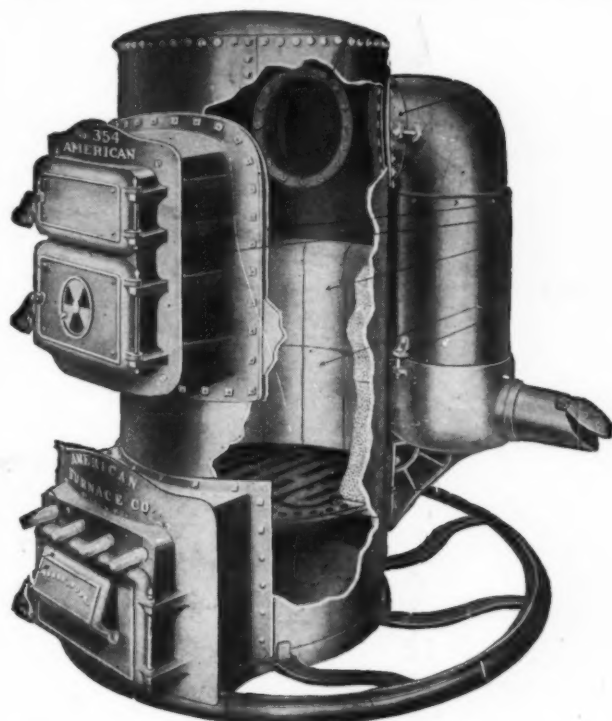
Let us explain this method to you and show you how other dealers are making bigger profits with the American Agency.

Just send us a note and we'll talk it over with you.

Also ask about the

THERMO Cast Iron Furnace

a better cast furnace at a price that makes good business. Ask for catalog on this furnace and our complete line.



THE super construction of the heavy American steel boiler plate furnace allows you to give your customers an unconditional guarantee of lasting quality and service.

Nothing but steel will enable you to guarantee a furnace against *cracking*. Nothing but a steel furnace gives you an opportunity of making good your promise and guarantee against *leakage*.

Notice the massive solid construction and proper efficient design of this furnace. Write today for our latest catalog that gives complete interesting details of construction.

AMERICAN FURNACE COMPANY

2719 to 2731 Morgan St.

St. Louis, Mo.

AMERICAN

BOILER PLATE

Warm Air Furnace

NOVELTY

WARM AIR FURNACES



Distinctive because of its improved Crab design and straight corrugated fire-pot.

The Novelty Sales Plan

is just as distinctive as the Novelty Furnace. Novelty dealers in all parts of the country are building up a profitable warm air heating business by employing it.

Let us tell you the experiences of some of these men—write for details of the sales plan.

The Novelty Warm Air Furnace embodies every desirable feature developed in 77 years of designing and manufacturing heating appliances.

Deep cup-joints—no gas leakage. Extra heavy scientifically proportioned "Crab." Two-piece straight corrugated fire-pot—withstands expansion and contraction. Extra large front water pan insures moist air. Revolving triangular grate bars—will not clog.

Write us for the Novelty sales plan. A few agencies open in certain sections—write for complete information.

1847

ABRAM COX STOVE COMPANY

1924

Philadelphia

New York

Chicago

Dept. T-2—American & Dauphin Sts.

Dept. T-2—113 E. 34th St.

Dept. T-2—736 West Monroe St.

For 77 years manufacturers of NOVELTY Pipe and Pipeless Furnaces; Round and Sectional Boilers; Coal Tank Heaters and Laundry Stoves; Coal Ranges; Combination Coal and Gas Ranges; FORTUNE Gas Ranges and Gas Water Heaters.

Founded 1880 by Daniel Stern

Thoroughly Covers
the
Warm Air Furnace
Sheet Metal, Stove
and
Hardware Interests

AMERICAN ARTISAN and Hardware Record

Address all communications
and remittances to
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Table of Contents

	Page		Page
Editorial	21	Dodd Advocates Budgeting Business at Indiana Retail Hardware Dealers Convention.....	37
They Are Selling Straw Hats in Chicago Now. Have You Ordered Your Furnaces?.....	21	New York State Retail Hardware Convention Program	40
Random Sketches, by Sidney Arnold.....	22	Nebraska Retail Hardware Convention Pro- gram	41
Heating and Ventilating Department.....	23 to 26	Sam Hill, Sr., Capitulates to His Son.....	42
Efficiently Ventilating First Floor and Base- ment of New York Department Store, by A. M. Feldman.....	23	Arrangement of Store Ranks in Importance with Window Display.....	43
Allen of South Dakota Says His Hornets Will Sting Even in Sub-Zero Weather.....	25	Coming Conventions.....	44
Sheet Metal Department.....	27 to 34	Retail Hardware Doings.....	44
Indiana Sheet Metal Contractors' Association to Employ Paid Secretary.....	27	Stove and Range Sales.....	45 to 47
Paul R. Jordan Expresses Need for Competitor Coöperation	29	The Approach Shortly of Spring and Summer Will Increase Oil Stove Sales.....	45
Kothe Objects to "Flimsy" Method of Con- structing Puttileless Skylights.....	32	Guessing Contest and Mystery Contest Increase Sales of Gas Ranges.....	46
Brother Allen from South Dakota Disagrees with Brother Frye from Tennessee.....	33	Advertising Critic	48
Notes and Queries.....	34	Markets	49 and 50
Hardware Department.....	35 to 44	Hardware and Metal Prices.....	52 to 58
Window Display	35		

AN INVITATION

AMERICAN ARTISAN courteously invites and urges you to participate in the privileges and benefits of its Service Department. Any phase of the warm air heating and sheet metal industries or stove sales and window display questions may be profitably and instructively discussed in this department. If your problem is a knotty or technical one, submit it to the Service Department and secure the benefits of the opinions of other men. It is an exchange information department, and you are asked to relate your accomplishments and tell how you have surmounted difficulties. Wherever possible rough sketches or photographs should accompany the questions or suggestions, as they always make clear the points involved. Use this Service Department freely; it is yours.

ALPHABETICAL INDEX AND CLASSIFIED LIST OF ADVERTISERS, Pages 58-60-62

If Moore's Air-Tight *Self-Cleaning* Furnace was built like ordinary Furnaces in every respect except for these two features Moore dealers everywhere would still be able to "talk rings" around any of their competitors

Moore's Self-Cleaning Heat Intensifier



MOORE'S One-Piece Self-Cleaning Heat Intensifier is *more* than a radiator, so constructed that the *flames* come in direct *contact* with its *entire surface* at all times. This assures maximum radiation of heat. Not a sharp corner on it; no place for ashes and dust to settle and clog the flues; it *never* has to be cleaned and you know how an argument like that appeals to the one who has to care for the furnace. It is the only type of radiator we know of that has no cracks, joints or sharp corners and is *one piece* in *every sense* of the word even to the smoke collar which extends through the casing. You have only to see Moore's Heat Intensifier to appreciate its superior construction and wonderful sales advantage.

Moore's Anti-Carbon Firepot



THE Anti-Carbon slotted firepot was originated by the Moore Folks and years of service in the field has proven its superiority. It is heavy and substantial with self-cleaning flues in its walls that make it possible for warm air to mix with the burning fuel, igniting the gas, smoke and soot and converting them into heat. This *extra heat* is lost up the chimney from ordinary furnaces—yet government statistics show it represents *one-third* the heat value of soft coal. Surely when you point *this saving* out to a Furnace prospect it is going to *carry weight*.

The easier you can sell, the LESS your cost of selling and the GREATER your profit. Another one of the reasons Moore's makes money for all who handle it. Write for our agency proposition—today!

AND in addition to these two wonderful improvements in Furnace construction, Moore's Air-Tight *Self-Cleaning* Furnace has—

Large moisture pan up over the feed door where it belongs; lever shaker handle built waist high; large feed section with big radiating capacity; double feed door plenty big to take heaping shovel of coal; air-tight ash pit door; large roomy ash-pit; ball-bearing grate with shaking ring and anti-clinker draw center. **IMPORTANT**—Every Moore's Furnace is *completely* assembled at the factory before it is sent out, something few manufacturers do, yet it is *necessary* to assure you a perfect fit *every time* and makes installation easy.

Moore Brothers Company
Joliet, Illinois—More than 66 years in the Business

They Are Selling Straw Hats Now in Chicago—Have You Ordered Your Furnaces Yet?



THEY are selling straw hats in Chicago right now.

Retail stores are displaying them in their windows and advertising them in the newspapers.

Manufacturers are advertising them in the trade papers and showing them in their sample rooms.

But nobody has as yet ventured down on Michigan Boulevard wearing a straw hat.

Retailers are selling them to people who will spend the next couple of months in Florida and other southern states.

Manufacturers are taking orders from retailers who expect to sell them in about five months from now.

They were made several months ago.

Why?

Because the manufacturers know that at a certain time there will be an almost over-night flood of straw hat buyers who will not wait.

The retailers are buying them now.

Why?

Because they know from experience that the manufacturers cannot make deliveries at the time the public wants straw hats unless arrangements are made to provide stock for such deliveries, and because they realize the unfairness of asking the manufacturers to make up a big stock without a fair volume of advance orders.

What is the connection between the selling of straw hats in January and the warm air furnace business?

Simply this:

For years we have seen salesmen for furnace manufacturers start out to take orders for summer and fall delivery. They leave the factory early in January and keep on their weary job day in and day out, occasionally locating a furnace installer who has vision enough to see the necessity for safeguarding

his business by placing a conservative order, but usually having to use all sorts of persuasiveness to induce their customers to do the reasonable and only fair thing.

And year after year, these same customers keep on putting off the actual ordering until they have the business on top of them and must have the furnaces by return mail shipment!

And year after year, they lose sales and profits because they cannot obtain the material they need, the manufacturers and supply houses being swamped with rush orders from a thousand odd other customers.

In other lines, merchants have learned that it pays in the long run to prepare for the business they expect to secure, by placing advance orders—and also that it pays to go out and hunt for business.

In the furnace business, there are still too many men who hold off on the buying until they actually must have the goods in order to even fill such demand as comes to them even without active solicitation.

And as a result, every fall there is always a shortage which cannot be filled—meaning actual losses that run into millions of dollars.

One of the subjects which may well be taken up for consideration by the Educational Research Bureau of the National Warm Air Heating and Ventilating Association, when it shall have been organized, is that of finding ways and means to change this unbusinesslike attitude on the part of too many installers and their failure to anticipate their wants far enough in advance to give the manufacturers something more tangible upon which to base their operations than mere hopes and guesses.

Incidentally, such a step is bound to result in better deliveries, better finish and lower prices for every installer who thus helps to improve conditions.

Random Notes and Sketches.

By Sidney Arnold

I do not, under ordinary circumstances, refer to our customers' advertising matter on this page, but the other day Lewis Moore handed me a little folder which, from its form as well as from its contents, is entitled to comment—and incidentally or principally, just as you prefer, there is a real bit of good business sense in it, written in friend Tinkler's typical, whimsical style.

Here is part of it—you ought to write to Moore Brothers, Joliet, Illinois, for a copy of the folder. It may help you get some more business on stoves, ranges and furnaces in 1924:

hen hemple (of course, that isn't his real name)

is the durndest cuss, for makin' money,

y' ever did see;
just seems to get it somehow
like it blossoms on trees.

So one day I says to Hen, says I:
"Hen, how's it happen you make so much money with so darn little scrappin'?"

And what Hen said was worth listening to!

Hen said he has been in the hardware business twenty years.

For fifteen years he didn't make much more than a living.

And he had a big investment that should have paid big returns on interest alone.

So he got to looking around and discovered a lot of things.

He found that a good share of his investment was in specialties. And then he found the trouble.

Instead of an investment in one line of washing machines, Hen found he was shouldering the load of four.

And the same was true in kitchen cabinets, and cream separators, and talking machines and stoves.

But the stoves! Hen says that's where he made the big discovery.

"Doggoned if I didn't have a sample of something from most

every stove manufacturer in the business," says Hen.

And he couldn't sell enough of any one to carry the investment load of the dead lines.

So Hen says he had a sale—

And he sold every stove of every line but one, at cost.

And the stove he decided to keep and push was one in a full line family.

So Hen says he just sampled one or two of everything in the line.

And the display was attractive,

And Hen learned everything there was to learn about the One line.

And he could talk it good. And Hen says he found that when they bought a cook stove, it was easier to sell 'em a heater or a furnace from the same line.

And now Hen's investment is smaller, his turnover greater,

And the Stove department is sure a profit-maker.

* * *

"Some people are easier to get along with than others," said Ross Strong, of the Homer Furnace Company, "and then there are some who remind me of Hans Schmidt.

"Hans Schmidt was reputed to be the meanest man in the neighborhood. He died. His body was placed in the grave, and according to an old Pennsylvania German custom, the people stood around the open grave waiting for someone to say some good thing about the deceased before filling in the grave. After a long wait Gustave Schultze said: 'Vell, I can say joost one goot thing about Hans; he vasn't always as mean as he vas sometimes.'"

* * *

When "Trow" Warner was promoted to be salesmanager of the Tuttle & Bailey Manufacturing Company, of course he had to move his "lares et penates" to the town where the "White Way" originated.

He set up his furniture during the day, but when darkness came

found that the electric lights refused to function. So he set out to find an electrician. He found a man sitting on the curbing, but didn't observe that the fellow had been sampling some pre-Volstead stuff.

"My friend," said he, "can you tell me who is a good electrician?"

"Tom Edishon!" came the somewhat thick reply.

* * *

**Unique Assistance Rendered Member.
Unique Indeed!**

A few weeks ago the store of Frank Ruprich, Westboro, Wisconsin, was burglarized. Some merchandise was taken, and the combination lock of the safe destroyed by the means of a sledge hammer. *The safe resisted the burglars' efforts, with the result that Mr. Ruprich found himself with all his records and money locked up in a safe with the outer parts of the lock destroyed.* He appealed to the Association by letter and response came through a man who was sent, who not only succeeded in opening the safe, but also has accomplished the apprehension of one of the burglars, who is now in jail awaiting sentence. And all for \$10.00 a year. —*Members Exchange.*

* * *

Over the grave of a charwoman in Chiswick churchyard, in England, there is this epitaph:

"Dear friend, I am going

Where washing ain't done, nor sweeping, nor sewing;

But everything there is exact to my wishes,

For when they don't eat there's no washing of dishes.

I'll be where loud anthems will always be ringing,

But, having no voice, I'll be out of the singing.

Don't mourn for me now; don't mourn for me never—

I'm going to do nothing forever and ever."

Had she only lived in the United States of today with its gas stoves, electric dishwashers, vacuum cleaners, electric motors for sewing and washing machines, she wouldn't have had to die to "do nothing forever."

Efficiently Ventilating First Floor and Basement of Large Department Store.

A. M. Feldman, Consulting Engineer, Meets These Problems Successfully in New York City and Cleveland.

SPEAKING before the members of the American Society of Heating and Ventilating Engineers meeting in the Pennsylvania Hotel, New York City, January 22 to 25, 1924, A. M. Feldman, Consulting Engineer, New York City, presented a concrete example of the problems met with in the heating and ventilating of a department store.

An important problem to an engineer arises in the construction of a building which is to house a department store when he considers the system which is to govern the ventilation of the main floor and the basement. On these two floors, to a very great extent, are held the special sales which are so frequently conducted with the object of attracting as great a number of customers as possible. As a rule this means crowded aisles, a mass of people in a comparatively limited area.

The basement is generally windowless. Hence for its proper ventilation a supply of fresh air and exhaust system should be provided in evenly balanced quantities. On the ground floor one has an additional

vital factor to consider, the inrush of cold air through the entrance doors during the cold season which causes the most unpleasant draughts. These are a most annoying cause of discomfort, especially to the sales force. On account of the draughts occasionally glass shields are placed in front of the show cases which are situated near the entrances. This does not, however, afford the clerks a sufficient protection. An investigation would easily prove that the sales people who work near the doors are all too frequently ill with colds or other respiratory diseases.

Entrances from without are usually provided with vestibules, and while these are heated, there is always a rush of cold air *into* the store resulting from the simultaneous opening of the outer and inner doors.

A practice developed by the writer of designing the ventilating system for the ground floor of a large department store so as not only to provide an ample supply of fresh air large enough for an unlimited number of customers and sales force, but also to eliminate all danger of the above referred-to draughts. Highly desirable results have been satisfactorily accomplished even without the use of outer vestibule doors. The absence of these has added materially to the space surrounding the show windows, in consequence of which the

prospective customers find added attraction in responding to the window-dresser's art.

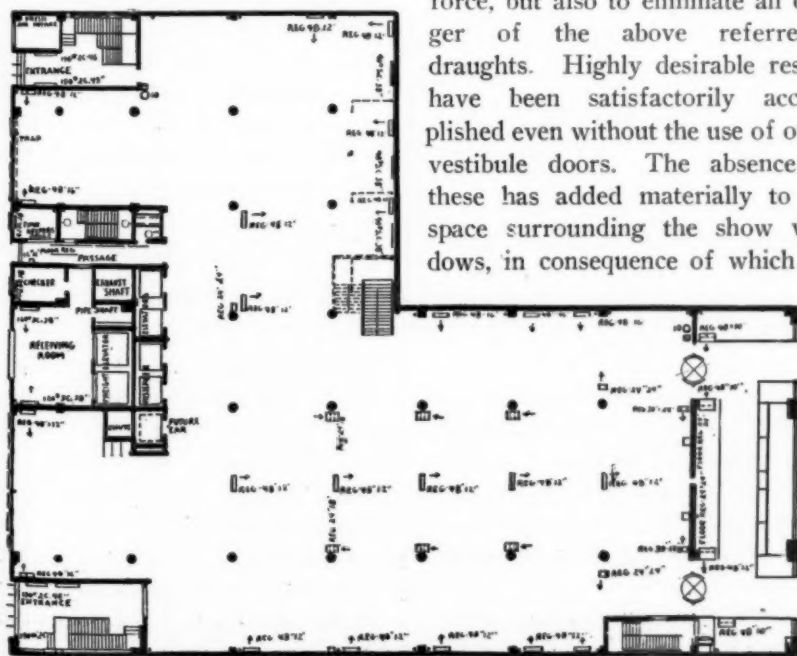
This ventilating system is so designed that the fresh air supply is greater than the exhaust. More air is being delivered throughout the first floor than is taken out by the exhaust fan. The excess of air has to escape through the elevator shafts and entrance doors. Therefore, when the latter are opened, the warm air from the store escapes thus practically giving a warm greeting to the prospective customers. No draughts of cold air are rushing in on the sales force who are thereby in a better physical condition to give full attention to the customers.

In addition to this, the design includes the blowing in of re-heated air through registers in the ends of the counters at the doors, and also under the show windows just outside of the entrance doors. Notwithstanding the absence of outside doors in the spaces between the show windows the atmosphere around the entrances is kept comfortably warm and pleasant, thus again inviting the street crowds to linger at the show windows, and adding to still a greater probability of their entering the store to buy the goods displayed.

This plan of ventilation has been successfully carried out by the writer in the Lindner Department Store in Cleveland, Ohio, and lately in the L. M. Blumstein Department Store on 125th Street between 7th and 8th Avenues, New York City, both types of the highest development of such buildings.

The problem of the distribution of air in a store is a difficult one on account of the large open floor area. The plan used by the writer in the Blumstein Department Store will be described.

Fresh air is taken from out-of-doors and warmed by passing over *vento* stacks and is discharged through a brick tunnel under the basement floor, then through the vertical galvanized iron risers, horizontal trunk lines and branches it is distributed under the furred basement ceiling. Space has been pro-

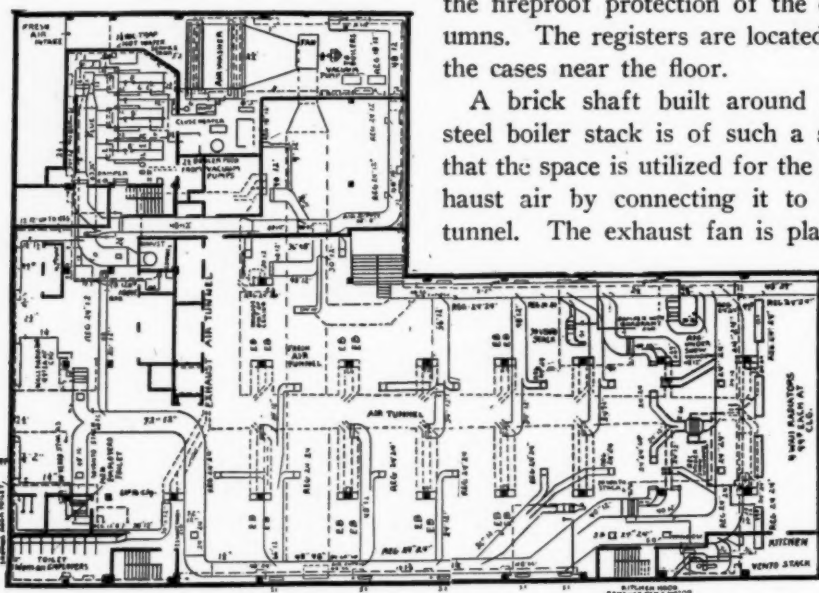


Arrangement of First Floor Registers.

vided between the tempering and heating stacks for the future installation of an air washer which has been temporarily eliminated from the original plan.

Registers are evenly distributed over the entire ceiling and side walls for delivery of air to the basement, and branches are taken to the first floor through vertical ducts around the walls, behind the cases, discharging about 6 feet 9 inches above floor and through registered panels in front of the show case bases.

The net cubical content of the basement is 253,000 cubic feet, and



Showing Arrangement of Basement.

that of the first floor, 311,565 cubic feet. The fresh air fan is of a capacity to deliver a maximum of 100,000 cubic feet of air per minute, requiring a 50 horsepower electric motor to drive it. This is the space occupied by the fixtures and goods, as well as by the people taken into consideration. The supply of fresh air is equivalent to a complete change every 4 to 5 minutes.

During the winter months it was found that sufficient air is delivered without causing any draughts by running the fan 70 per cent of its maximum speed.

The out-door air is heated in winter about 74 degrees and delivered through the registers at about 68 degrees, which was found satisfactory for maintaining the temperature in the store uniformly all day around

70 degrees. The temperature is controlled automatically by means of thermostatic control. In the summer the fan is kept running at full speed.

The exhaust air duct work is distributed entirely through underground tunnels and branches under the basement floor and brought up through the floor in galvanized iron duct casings that are incorporated in the counters, the tops of which are utilized for the display of goods.

The exhaust ducts for the first floor are carried up along the building columns and are incorporated in the fireproof protection of the columns. The registers are located in the cases near the floor.

A brick shaft built around the steel boiler stack is of such a size that the space is utilized for the exhaust air by connecting it to the tunnel. The exhaust fan is placed

in the roof pent house, and the foul air is thus discharged above the roof of the building. The heat of the stack adds a great deal to the motive power of the exhausting effect over and above what the exhaust fan is designed to do.

Robert D. Kohn and Charles Butler, New York, were the architects of the building.

"Them's" Kind Words You Speak, Mr. Graham.

TO AMERICAN ARTISAN:

Just a bit of news for your valuable magazine. Will say that your Special Edition, just received, was a winner.

C. H. GRAHAM,
Hamilton-Graham Company.
Oskaloosa, Iowa, January 5, 1924.

Hamilton-Hayes Company, Bloomington, Illinois, Reorganize —Capital Stock \$100,000.

At a recent meeting of the stockholders of the Hamilton-Hayes Manufacturing Company, 718 East Empire Street, Bloomington, Illinois, a reorganization was effected which promises to be of great value.

The capital stock of the company was fixed at \$100,000. It is proposed to at once increase the force of salesmen, purchase new equipment and enlarge the output of the plant.

The name of the company was changed to the Hayes-Custer Stove and Furnace Company.

The following officers were elected:

President, Treasurer and General Manager, John W. Hayes; Vice-President, Secretary and Superintendent, Joseph Custer; Assistant Manager, Paul Hayes.

New stockholders were introduced at the meeting in the persons of Frank H. Hayes of Morris, Illinois; Charles Custer, of Normal, and Paul Hayes, Bloomington.

The resignation of Kenneth S. Hamilton as Secretary and General Manager was presented and accepted.

The history of the stove works dates back to 1865. W. F. Flagg was the progenitor and the plant for years was known as the Empire Machine Works. It later changed hands and became known as the Co-operative Stove Works. From this it changed to the Hamilton-Hayes Company some ten years ago.

Wife of J. J. Burgess Died Recently at Rock Island.

The many friends of J. J. Burgess, President of the Rock Island Register Company, will sympathize with him in the loss of his wife, who died recently from a complication of diseases.

Mrs. Burgess, whose maiden name was Eaton, was born in Fulton, Illinois. A son, nine years, and a daughter, twelve years, mourn with the husband a beloved mother and helpmate.

Allen of South Dakota Says That His Hornets Will Sting Even in Sub-Zero Weather.

He Wants Turton to Explain What He Means When He Says Pipeless Furnace.

A. A. ALLEN, of Aberdeen, South Dakota, has his dander up. He got riled at Turton's letter which was published in our January 12th issue, and here he is, red hot on brother George's trail:
To AMERICAN ARTISAN:

Somehow your January 12th issue rattled my hornet's nest and I feel like stinging.

In a previous issue Mr. Turton stated that he has successfully heated houses with a pipeless furnace.

I understand a pipeless furnace to be a furnace placed in the basement, having the outer casing extending from the base-ring to outer edge of the duplex register in the floor; by connecting the smoke pipe and fixing the chains we have then a complete heating unit.

Before the hatching-out of the pipeless furnace I restored the confidence in hot air furnaces in one town with the one and two register furnaces. I used two registers, one on each side of the partition. Then I made a two-way dome like a pair of pants upside down.

I heated a "mothers' room" in a church, located in the northwest corner and twenty feet away from the furnace. The furnace was under one big register.

The "mothers' room" would heat in about twenty minutes, the church in from one to one and one-half hours in severe weather.

Mr. Turton suggested that the pipeless idea be thrashed out and invited us in. I am in, and I am telling what I see—"in," and with a feeling that he knows the heating game. But—it looks to me that he is somewhat like the autoist who knows how to drive his car, but sometimes exceeds the speed limit.

He is rather reckless with the word "pipeless."

On page 17 of your January 12th issue he has given us a plan of a

heating system that he starts with a pipeless and at once gives the pipeless a solar plexus. He positively admits that the pipeless is a failure and promptly condemns it, as he should do, then proceeds in a masterly way to remedy it—and this by converting it into a pipe job.

The moment you add a pipe you automatically condemn the pipeless as a failure and admit the pipe for relief, and a good pipe job would blush with the injury and shame in having to acknowledge it as a relative.

Do not call it a pipeless furnace after you have fixed it with pipes, but tell us how you successfully change a pipeless furnace into a pipe job and my hornets will work for you.

Again I say there is but one way to heat all rooms with a pipeless furnace—by grills near the ceiling; registers in the ceiling; sawing off the doors at the bottom; grills in the baseboards; leaving doors open, and so forth, if the house owner will stand for all this racket.

Few furnace men will return the cold air from the bath or kitchen to the furnace, but will vent the bath to the flue going to it through the floor and entering in the basement, or through the baseboard into the wall, connecting at top of partition with an oblong to round starter and then to flue with round pipe.

I may be wrong. Come on, fellows.

Very truly,

A. A. ALLEN.

1209 South Main Street, Aberdeen, South Dakota.

You may be one of the cleverest men in your business and yet you can learn something from almost any other man similarly occupied. Study your trade journals for the methods of other successful men.

Northern Institute Issues New Catalog of Courses in Heating and Ventilating.

A thorough knowledge of the business in which a man is engaged is absolutely indispensable to his making a success in that business. He must have knowledge at his command which will enable him to solve the problems with which he is constantly confronted. He gains this knowledge by a systematic method of acquisition.

But a college training is impossible to most men. Many of them go out into the world and take up their life work with little more than a grammar school training. How, then, are these men to acquire the knowledge they require?

The Northern Institute of Heating and Ventilating Engineers, 5713 Euclid Avenue, Cleveland, Ohio, has recently issued its new catalog of courses.

For the man who wishes to increase his knowledge of the heating and ventilating field, it will pay him to send for this catalog. This catalog contains a complete outline of the course, length of time required to complete it, and the cost.

Write for the catalog now.

Swager Tells "Southern Subscriber" He Hasn't Found Oil Burners Satisfactory.

To AMERICAN ARTISAN:

In your January 26th issue "Southern Subscriber" wants information on oil burners for heating.

I must say, my personal experience has been that I have never found an oil burner that was successful; that is, to what I thought an oil burner should be.

I have found some fault with all of them, or all that I have ever tried—and I have tried a good many. In fact, I have tried a good many years to find one that would give the results that I thought it should.

"Southern Subscriber" can rest assured that his cast iron furnace, unless it is gone as far as heating is concerned, will take care of the oil burner, will last as long and will not

smoke any more than the best steel furnace.

Now if this will do "Southern Subscriber" any good as far as information goes he is surely welcome to it. Also if he finds an oil burner that is a success I should be glad to know the name of it.

Let's have this subject discussed.

Yours very truly,

B. J. SWAGER.

Pleasant Lake, Indiana.

**Wise Pipeless Furnaces
Being Extensively Advertised
at New Bedford, Massachusetts.**

There are three essentials which are absolutely necessary to a good advertisement. There may be further embellishments to the advertisement if desired.

There must be something definite to offer; there must be a specific group appealed to; there should be adequate definitions and illustrations. Advertising which does not contain these three essentials is generally classed as publicity; it creates good will, but perhaps does not contribute directly toward increasing the number of sales.

The accompanying reprinted advertisement was taken from a New Bedford, Massachusetts, paper. It is an especially well arranged piece of copy, showing the various sizes of furnaces carried in stock by the

Standard Plumbing & Heating Company.

The type is excellently arranged. The headline is very good, and the little boxes on either side contain cryptic pointed matter, well designed to taper down into the subject at hand.

The furnace illustration and the trade mark are very good, the latter being that of the well-known Wise Furnace Company, Akron, Ohio.

The original ad, as it appeared, was 7x15 inches; that is, seven columns wide and fifteen inches in depth.

**Harry S. Van Denberg Finds
AMERICAN ARTISAN Want Ads
Productive of Results.**

TO AMERICAN ARTISAN:

Our advertisement in the January 5th issue of AMERICAN ARTISAN produced excellent results. It has been the means of securing for us a worthy shop foreman.

We shall thank you to discontinue the ad you have been running for us. It has been "worth many times the year's subscription price of your paper."

Yours very truly,

VAN DENBERG SUPPLY CO.

HARRY S. VAN DENBERG,

President.

Rockford, Illinois, January 17, 1924.

**Independent Register and
Manufacturing, Cleveland,
Issue Circular on Register Face.**

The Independent Register & Manufacturing Company, Perry Payne Building, Cleveland, Ohio, has issued a circular describing the Independent "Fabrikated" Register Face. The face, the circular says, permits 82 per cent open area.

The circular says in part:

"The outer frame of angle iron, the grill formed of strip steel $\frac{1}{8}$ -inch wide, in varying depths to $1\frac{1}{2}$ inches, depending upon the size of the face, all fabricated into uniform squares with openings $\frac{3}{8} \times 1\frac{1}{8}$ inches. The strips are securely interwoven and the frame corners welded."

Write for further particulars.

**Imagination Will Help Us
to Pass Over Rough Roads.**

The imagination is a wonderful substitute for wealth, luxuries, and for material things. No matter how poor we may be or how unfortunate—we may be bedridden even—we can by its aid travel round the world, visit great cities and create the most beautiful things for ourselves.

It's the early bird that gets the worm. This applies also to the furnace and sheet metal business.

**LOOK HERE—If It's Pleasure, Comfort and Heat You Want During
the Coming Cold Season**

Our Suggestion of the Slogan to
Talbot & Co. Is:

"Every Cloud Has a Silver Lining
So Why Not Have One Up Your
Sleeve."

But Our Slogan Is:
"Be Wise and Install a Wise"
Ours Needs No Lining



See This Furnace in Our Showroom

WISE PIPELESS FURNACES

No. 818—18 in. Grate
No. 820—20 in. Grate

No. 140—20 in. Grate
No. 144—23 in. Grate

SET UP IN ONE DAY

Standard Plumbing and Heating Co.

Samuel Holden

1068 PURCHASE STREET

NEAR NORTH STREET

Call Bell Phone 6389 for the Best in Plumbing and Heating

Our Prices and Terms Are Right.
Don't Wait Too Long; You Know a
Bird in the Hand Is Worth Two or
Three Flying Around.

Speaking of Birds, We Have
Them. Just Look at that Wise Old
Owl in the Corner and He Sure Does
the Work.



Seven Column 7-Inch Furnace Advertisement, Having Much to Commend it in Pushing Wise Pipeless Furnaces, and Which Produced Good Results Where It Was Used.

Indiana Sheet Metal Contractors Will Employ Paid Secretary and Have Raised Membership Dues.

Good Attendance, Instructive Addresses by Lamneck and Langenberg Feature Annual Convention.

THE Fifth Annual Convention of the Sheet Metal Contractors' Association of Indiana came to order on the evening of January 29th in the Hotel Severin, Indianapolis, Indiana, when President A. W. Dudley reviewed activities of the Association for the foregoing year. He reported an increase in membership and urged that the Association be placed on a financial basis which will permit the employment of a paid Secretary, in order that he may devote considerable time to the organ-

Treasurer J. D. Ortmeyer's report showed a bank balance of \$611.62, with about \$150.00 in dues being paid in addition.

A report of the meeting of the Executive Committee, held during the afternoon, was read. This report included a resolution advising that the State Association withdraw from the National Association, and arrange for such membership dues as will make it possible to maintain a paid Secretary.

President Dudley announced the following committees:

Resolutions: W. S. Waters, V. D. Roland, Elkhart and Marion.

Auditing: Joseph C. Gardner, Albert Hartman and Earl Clinton.

Grievance: John Balkema, Charles Gatz and C. W. Roland, Richmond.

By-laws: Joseph E. Mattingly, W. A. Brown and C. C. Lankford, Princeton.

The last named committee was instructed to bring in a recommendation to the Wednesday forenoon session for such change of the Constitution and by-laws as will provide for withdrawal from the National Association and also for raising the annual dues, in order to provide for the employment of a paid Secretary.

Wednesday's Session.

Arthur P. Lamneck spoke on "Equipment for Business," the subject which had been set for an address by E. L. Seabrook, the National Secretary, who was prevented from being present at the last moment.

Mr. Lamneck told of the many benefits he had received from being a member of and attending the conventions of sheet metal contractors' associations.

Some of the high spots in his address were:

The average sheet metal contractor is 90 per cent efficient in buying.

He is only 50 per cent efficient in estimating.

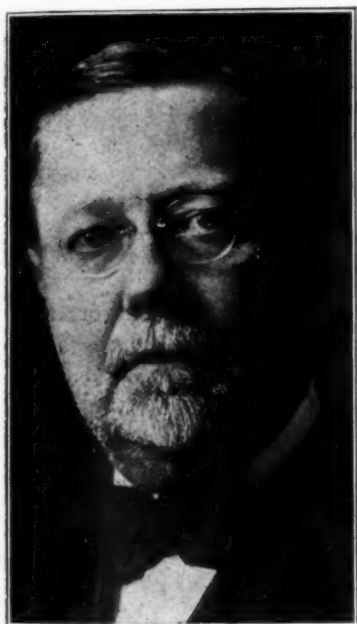
He is only 50 per cent efficient in closing contracts—following up estimates and finishing the sale.

He is only 25 per cent efficient in keeping records of his business.

In cost accounting he is 10 per cent efficient.

As a collector he is only 17 per cent efficient.

In paying his own bills he is only five per cent efficient in the matter of taking his discounts, also he is 60 per cent efficient in the actual payment.



Joseph C. Gardner,
President-Elect, Indiana Sheet
Metal Contractors' Association.

ization of cities not yet represented in the Association.

He cited the fact that his work as President had been a benefit to himself because of the greater acquaintance he had made among other sheet metal contractors in the state.

Secretary Leslie W. Beach's report showed that a gain had been made in new members and that quite a few old members had come back into the fold.



Leslie W. Beach,
Re-Elected Secretary Indiana
Sheet Metal Contractors'
Association.

As to credit standing he is 50 per cent efficient.

As an advertiser he is 15 per cent efficient.

In developing "new business" he is only five per cent efficient.

Generally speaking, taking an average of all these figures, the average sheet metal contractor is only 27 per cent efficient.

Improvement of this low percentage can best be obtained through associating with other men in the

same line—such as you have an opportunity for in your local, state and national organizations.

Mr. Lamneck then went into the matter of Overhead Expense and outlined the following schedule of the items that would be reasonably certain to apply to a business of \$50,000 a year, the amounts necessarily varying with the nature of the work:

\$5,000 Invested—Three Men, Three Helpers—14,400 Hours of Productive Labor.

Rent	\$ 600
Salary	2,600
Interest on investment.....	300
Driver	1,560
Stenographer	1,300
Insurance	200
Interest on borrowed capital	300
Advertising	300
Damaged material	500
Loss of time.....	2,700
Truck expense	300
Car	300
Membership in trade association	10
Depreciation	500
Convention expenses	100
Bad accounts	500
Postage, etc.	150
Accident insurance	50
Income tax	50

Total\$12,320

Overhead Is 87 Cents Per Hour of Productive Labor.

Material	\$100.00
6 Hours, mechanic	6.00
6 Hours, helper	3.00
87 Cents per hour overhead	10.44

Cost\$119.44

This is example of cost estimate.
Profit must be added.

E. B. Langenberg Speaks.

At the afternoon session E. B. Langenberg spoke on the development in the Research and Code departments of the National Warm Air Heating and Ventilating Association, featuring the decision at the recent meeting at Urbana, Illinois, to construct a typical residence for the testing of warm air furnaces under actual conditions, and the approval by the American Society of Heating and Ventilating Engineers

of the basement pipe area formula in the Standard Code for Installation of Furnaces in Residences.

Mr. Langenberg urged that the contractors make the fullest possible use of all the information now being obtainable through the various organizations of manufacturers, installers and sheet metal contractors.

A. P. Lamneck stated that the Standard Code has been made a portion of the Building Regulations of the city of Columbus, Ohio, with provision for proper inspection by competent men employed by the city; also providing that cold air must be furnished either by a re-



Joseph E. Mattingly,
Retiring 1st Vice-President Indiana Sheet Metal Contractors' Association.

turn duct, or from the outside, or a combination of the two. The result has been that better installations are now the rule.

Reports from local associations were made by John Balkema, Lafayette, the oldest local in the state—21 years; F. E. Clinton, East Chicago; J. O. Ortmeier, Evansville; W. F. Stockford, South Bend; W. A. Brown, Marion; Joseph C. Gardner, Indianapolis; W. A. Dudley, Terre Haute, and others showed that where the officers were active the locals were prosperous.

Mr. Langenberg made an important suggestion—that a movement be started to organize a trade extension bureau on lines similar to that of the plumbers, by which the latter have been lifted out of the back alley

to the front street, with great financial benefit to every member.

Resolutions were passed thanking the Fur-Mets, the management of Hotel Severin, E. B. Langenberg and A. P. Lamneck for their help in making this convention a success.

Joseph E. Mattingly, Indianapolis, introduced a resolution changing the By-laws and Constitution to provide for withdrawal from the National Association of Sheet Metal Contractors and for other changes.

F. E. Clinton spoke against taking the step, stating that the proper method for rectifying grievances against the National Secretary is to bring the matter before the Trustees of the National Association and then wait for their response.

A. P. Lamneck urged that no hasty action be taken, pointing out that many important benefits have accrued to every member who really takes an interest in his business, because of the work of the National Association.

Charles Gatz, Gary, also spoke against the resolutions.

A. G. Pedersen cited some of the benefits that the National Association has actually produced for the members, such as the Standard Code, the information on costs, trade development, etc., and urged that the Association consider this very seriously before voting.

W. S. Waters, Indianapolis, urged the adoption of the resolution.

Charles Roland, Richmond, urged remaining with the National. The resolution was lost by a large majority.

The part of Mr. Mattingly's motion, providing for incorporation of the state association and the increase of the annual dues to \$10.00 per member as well as for the employment of a paid Secretary, was passed on a subsequent motion.

The Executive Committee and officers were empowered to arrange for the employment of a paid Secretary.

The following officers were elected:

President—Joseph C. Gardner, Indianapolis, by acclamation.

First Vice-President—August Hartmann, Terre Haute.

Second Vice-President—F. E. Clinton, East Chicago.

Secretary—Leslie W. Beach, Richmond, until such time as a paid Secretary is employed.

Treasurer—J. D. Ortmeier, Evansville, by acclamation.

Directors for three years—B. L. Roland, Elkhart, and John Balkema, Lafayette, holdovers being W. A. Brown, Marion; W. S. Waters, Indianapolis; W. F. Stockford, South Bend, and J. Clarence Watson, Vincennes.

Visitors to the Convention.

Among the visitors was Ed. Hof-feld, President of the Ferdinand Dieckmann Company, and A. P. Pryor, the Armco man, who came up from Cincinnati.

N. W. Manrow and his brother, C. A., who lives in Washington, Pennsylvania, were busy showing and explaining the Manrow patented border and support for wood reg-

Jones and a bunch of other good scouts; they took orders for Pexto tools and machines for sheet metal men, H. & C. registers, Champion warm air pipes and Wheeling ovens.

A. E. Watson, District Salesman-ager of the United Alloy Steel Com-pany, was certainly some busy man greeting his many friends.

Frank Wilberding, the "Tin-o-Red" man, looked quite natural at the head of one of the tables, al-though he did appear to be some-what peeved when the pretty lady sang to the man next to him.

Carl Olson, Logansport, gave the guests at the banquet a fine treat. He is a good sheet metal contractor and an excellent singer.

Karl Roth and Mrs. Roth, of the Braden Manufacturing Company, came over from Terre Haute to sell a few Champion mitres for eaves troughs and get a square meal. They did both.

"The heavenly twins," Herb and Jule, came up from St. Louis to look them over and see what there was to learn for a register and orna-mental sheet workman, and they had a good time.

Dave Farquhar, of the well known "Tee Bee" Vaudeville Trio, had a nice quiet time with "Pa" (Pete) Johnson, the Champion Fur-nace Pipe Man of Peoria, at the banquet, as neither was called upon to do any stunts.

Paul R. Jordan Expresses Need for Competitor Cooperation So That All May Prosper.

Shows Where All Factors of Industry Either Have or Must Recognize Value of Close Cooperation.

THE address published herein- after is that of Paul R. Jordan, Paul R. Jordan & Company, 28 South Meridian Street, Indianapolis, Indiana, delivered before the mem-bers of the Sheet Metal Contractors' Association of Indiana in conven-tion at the Hotel Severin, Indianapo-lis, Indiana, January 29 and 30.

The address is on "Coöperation," and was delivered at the banquet held at the Athenaeum on the eve-ning of January 30.

"Coöperation," by Paul R. Jordan.

This is the era of coöperation. We have passed through other eras—the era of agriculture; the era of the development of railroads; the era of the development of natural resources, particularly mineral; the era of business organization—trusts, mergers. And now we have come to the era of coöperation.

Everywhere we see associations, conventions, coöperative gatherings of all sorts. Never before have there been anything like the "get-together" meetings that we have now.

And this new phase is not merely a phase. It is more than a fad. As intelligent tilling of the soil was a

step in advance of just sowing and harvesting; as the railroad was a step in advance of waterways and roads; as the prospecting and devel-opment of mines added to the store of wealth of the nation; as business



Charles W. Gatz,
Retiring 2nd Vice-President In-
diana Sheet Metal Con-
tractors' Association.

isters, which is made in Goshen, Indiana.

J. M. Tough was on deck to tell about the wonderful invention of the Chicago Elbow Machine Com-pany.

John C. Henley, the Fur-Mets Treasurer, spent most of his time Wednesday at the Severin, but the Tanner exhibit in the Tabernacle was well looked after by Harry



Paul R. Jordan,
Retiring President Indiana Fur-Mets.

organization increased production; so is coöperation adding to our business life, both in wealth and in satisfaction.

We are learning that it is better to boost than to knock; that it is better to build than to destroy; that it is better to coöperate with our competitors than to cut their throats. Wealth, both material and intellectual, is a community thing. We gain by our neighbors' prosperity, lose by his failure. In helping him to prosper, we are helping ourselves. In staving off his failure we are saving ourselves a loss.

The labor unions have been the last to learn this. They have thought that by curtailing production, they could enrich themselves. But they have found an increase of wage based on such a move, more than offset by mounting prices due to curtailing production. That is one phase of coöperation. Every man is a consumer as well as a producer; a buyer as well as a seller.

Those who coöperate will be adequately rewarded, although he who refused may not be adequately punished. So, let's coöperate, each with each other and all together.

Meeting of United Sheet Metal Contractors of Chicago, Postponed Until February 7.

With a view to keeping up interest in the newly organized United Sheet Metal Contractors' Association of Chicago a meeting will be held in the offices of AMERICAN ARTISAN Thursday evening, February 7th, instead of as originally planned for January 31st.

Invitations have been issued to all sheet metal contractors in Chicago to be present at this meeting, and it is hoped to elect permanent officers for the Association at this time.

Lafayette Sheet Metal Local Will Celebrate Age of Majority on Wednesday, February Sixth.

The twenty-first anniversary of the organization of the Sheet Metal Contractors' Association of Lafayette, Indiana, will be celebrated with

a banquet on Wednesday evening, February 6th.

Indiana Fur-Mets Show Progress During 1923.

The annual meeting of the "Fur-Mets," the auxiliary of the Indiana Sheet Metal Contractors' Association, was held at Hotel Severin, Indianapolis, January 30th, and the reports showed a better condition, in membership, finances and spirit, than for several years past.

President Paul R. Jordan opened the meeting at 10:30 a. m. and called on E. W. Norman to report on the Roster poster. One thousand of these have been distributed among the contractors and additional copies may be obtained from Secretary Voorhees, 36 West Eleventh Street, Indianapolis.

A. E. Watson, President of the Ohio Auxiliary, reported that his organization has 110 members paid up and a balance of \$500 in the treasury.

Secretary Voorhees' report showed 105 members in good standing.



**O. Voorhees,
Re-Elected Secretary Indiana
Fur-Mets.**

Treasurer John C. Henley reported \$208.57 in the bank.

A spirited but good-natured contest resulted in the election of the following:

President—Phil H. Geitz, of Henry Foundry & Furnace Company.

First Vice-President—F. A. Wil-

kening, of Standard Metal Company.

Second Vice-President—F. L. Canine, of Crawfordsville Wire & Nail Company.



**John C. Henley,
Re-Elected Treasurer Indiana
Fur-Mets.**

Third Vice-President—Robert Kruse, of Kruse Company.

Fourth Vice-President—Ralph Ingalls, of Standard Metal Company.

Secretary—O. Voorhees, of XXth Century Heating & Ventilating Company.

Treasurer—John C. Henley, of Tanner & Company.

Directors—Paul R. Jordan, of Paul R. Jordan & Company; E. W. Norman, of Merchant & Evans Company; George Thomas, of Standard Metal Company, and Harry Neal, of Hall-Neal Furnace Company.

Membership Committee—Harry R. Jones, of Tanner & Company; Rolland Wilcox, of Standard Metal Company; W. R. Lawson, of Excelsior Steel Furnace Company, and Ben Booth, of Tanner & Company.

Michigan Sheet Metal Men, Roofers and Heating Engineers Invited to Attend Lansing Convention.

Secretary Frank E. Ederle, of the Michigan Sheet Metal and Roofing Contractors' Association, extends a hearty invitation to all sheet metal, roofing and heating contractors of

Michigan to attend the convention of that Association at Lansing.

Secretary Ederle emphasizes the fact that non-members will be the guests of the State and Local Associations and they need not feel under any obligation to join the organization unless they desire to do so.

Bert Cutler Calls It One of the Fixtures.

TO AMERICAN ARTISAN:

We are mailing you our check of \$2.00 for renewed subscription to AMERICAN ARTISAN.

We can't run the shop without it. It is one of the fixtures which becomes well thumbed by the end of the week.

Yours truly,

BERT CUTLER.

Shelbyville, Illinois, January 19, 1924.

New Milcor Data Book Now Ready.

The Milcor Manual, a 64-page data book in four colors, featuring Milcor metal lath and other Milcor fireproof building products, is just off the press. Copies may be secured by directing your request on your letterhead to The Milwaukee Corrugating Company, Fireproof Material Division, Milwaukee, Wisconsin.

This catalog is particularly fine in physical appearance as well as exceptionally interesting in contents. Milcor Stay-Rib and Netmesh metal lath and the practical adaptations of both are treated in a constructive manner. The "Expansion" line of corner beads, casings, flashings and base screed are featured in copper, zinc and galvanized. Old style base screed, corner beads and Milcor concealed picture moldings are included.

The section on Milcor Steel Domes and Reinforced Concrete Construction, with engineering tabulations, will prove highly valuable for reference.

Ten pages are devoted to approved specifications for architects. These specifications are handled in a practical manner for embodiment in

building specifications for fireproof construction.

In general, the Milcor Manual should prove to be of much value to architects, engineers, contractors, building supply dealers and all others who are in any way interested in modern construction.

Large, easily readable type is used throughout. Write today for this unusually interesting data book.

Mother of Frank E. Ederle Passes Away After 4 Weeks' Illness Following an Operation.

The sincerest of heartfelt sympathies from the entire sheet metal and kindred trades go out to Frank E. Ederle, Secretary Michigan Sheet Metal and Roofing Contractors' Association, Grand Rapids, and family in their recent bereavement caused by the death of Mrs. Charles H. Ederle ("Mother Ederle"), mother of Secretary Frank E. Ederle, which occurred at the Nichols Hospital, Battle Creek, January 29, following an operation which she underwent four weeks ago.

Mrs. Ederle was well known in Battle Creek and Bedford, where she had lived all her life. She always took an active part in the doings of sheet metal men at their outings.

Early last spring Mrs. Ederle was confined to her home at 72 Rose Street on account of poor health, and after a long struggle her condition finally grew worse during the past few weeks.

Mrs. Ederle was born in Bedford and spent her girlhood there. Forty-six years ago she was married to Charles H. Ederle and the last fifteen years of their married life at Battle Creek where her husband has carried on a sheet metal business.

She was a member of the Methodist Church of Bedford, and before her ill health was very active in the First Methodist Church circles at Battle Creek. She also had membership in the Modern Maccabees of Bedford.

Surviving her are the husband, Charles H. Ederle, who is very well known in the Sheet Metal trade,

one son, Frank E., and two grandsons, Charles L. and Dain H., of Grand Rapids; one sister, Miss Elsie Marvin.

Illinois Sheet Metal Contractors to Hold Convention at Peoria, April 8 and 9, 1924.

If one may judge by the reception given by the Peoria Local Wednesday evening, January 30th, to the State and Travelers' Auxiliary officers, the choice of Peoria for the Annual Convention of the Illinois Sheet Metal Contractors' Association was a mighty good one.

April 8-9 are the dates that have been decided upon, and the Jefferson Hotel will be the headquarters.

The committees which were selected at the meeting Wednesday evening are working hard to keep up Peoria's reputation as the best convention city—not only in Illinois, but in the United States.

The committees chosen to have charge of the Convention are as follows:

State Association.

C. N. Louis, Peoria
S. B. Gross, Quincy
Griff George, Springfield
Peoria Local.

C. G. Rapp
J. Oeschle
Charles Spindler

Travelers' Auxiliary.

O. Ingledew
A. H. Schiewe
T. Y. Eynatten

All of the men mentioned heretofore, with the exception of Griff George and the following, were present at the meeting:

Sam Burgess, Lew Denoyer, William P. (Tee-Bee) Laffin and Gus Hermesdorfer.

Believe in Yourself But Use The Lamp of Other Men's Experience to Light Your Way.

Every man starting out in business will have to go over a hard road and find out its turnings for himself. But he need not go over his road in the dark, if he can take with him the light of other men's experience.—John Wanamaker.

Kothe Objects to "Flimsy" Method of Constructing Puttless Skylights.

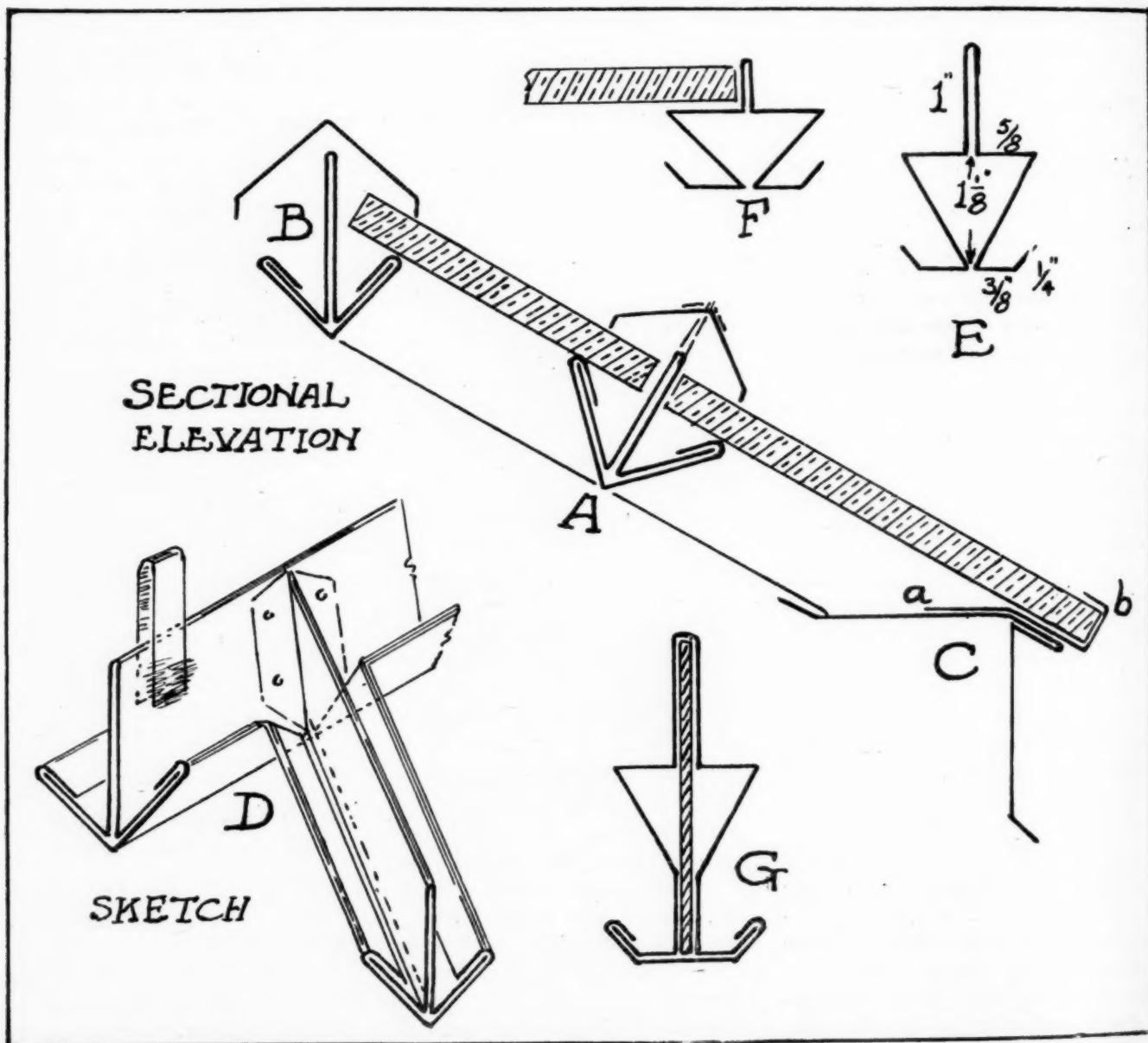
Objection Based Upon Extreme Width of Glass Rest, and Skylight Bar Does Not Give Strength in Its Width.

Written Especially for AMERICAN ARTISAN by O. W. Kothe, Principal, St. Louis Technical Institute, St. Louis, Missouri.

IT IS amazing to learn to what extent some shops go in simplifying designs for constructing skylights. Recently the writer came in touch with a skylight made similar to the details shown in this drawing and was informed that this employer lays great stress on the design of his skylight, and makes all that he sells along this line. The width between tip and tip of the flange has a spread

of as much as $2\frac{1}{2}$ inches, while the height of the fin has barely enough to project above the glass. Details of this kind the writer would not consider as good construction methods, first because of the extreme width of the glass rest, which obstructs light, and second, a skylight bar does not give strength in its width, but only in its height. Take the difference between details

F and E. The detail E is a normal bar used by most skylight manufacturers and for average sized skylights it has stood the test of time. Here and there a manufacturer, that is, a sheet metal shop, makes a bar similar as at F, where they are shallow but wide. The strain on the bars is vertical and therefore all the width that is put in a bar is useless. The same as the bar A under



Working Drawing Showing Details for Construction of a Puttless Skylight.

pressure the V-shaped bottom will straighten out and a buckle will develop on the bottom ridge; this will compress near the top of the fin, all resulting in sagging, and this in turn causes glass breakage.

The design A-B-C is simple enough, but it strikes a person as being a little too flimsy to build one's reputation on. Take the ridge bar "B" where the common bar "A" joins it as in sketch D. The glass shoulders must be cut out in order to make a continuous gutter for the common bar, which is also a weakness that with some strain often causes the solder to crack in these points. Take the lower curb C, it is rather a simple affair which has a strip soldered on as at a, which is then bent around the glass, as at b, to keep the glass from sliding down. These strips are often copper, since other metal would rust and so permit the glass to slide down. One good feature in these designs is the deep gutters they enjoy for puttless skylights, but in the writer's opinion that is about all that can be said for the entire layout. Take skylights of 6 to 8 feet in length in the run of glass, there is a considerable weight when the glass is as much as 20 to 22 inches wide and $3/16$ to $1/4$ -inch thick. Such runs of glass should really have a very substantial bar reinforced with a core iron, similar as shown as at G. This will resist the strain and avoid the sagging, and that in turn prevents the breakage of glass. Where glass costs a dollar to a dollar and a half a square foot, it is evident a sheet metal contractor must be considerate with his customer and not work in flimsy superstructure that will compel the customer to put in new lengths of glass every few years.

Survey of Non-Ferrous Metal Supplies.

Copper shipments during November by North and South American producers totaled 224,000,000 pounds, compared with 161,000,000 pounds a year ago, an increase of 39 per cent.

Refineries' output was 214,000,-

000 pounds, compared with 164,000,000 pounds a year ago, an increase of 31 per cent.

Stocks of refined copper on the first of December were 264,000,000 pounds, a slight decline since January 1, 1923.

Foreign shipments for the first eleven months of the year were about 758,000,000 pounds, or over 35 per cent of the output, with France and England taking about one-half of the total exported, Germany's takings having dropped from 14 per cent of the total exports in September to 5 per cent in October.

Zinc production during November totaled 44,000 tons, compared with 42,000 tons the month before and 40,000 tons a year ago, the in-

crease over a year ago being 10 per cent. Shipments were 39,000 tons, compared with the same amount the month before and nearly 39,000 tons a year ago, the increase over a year ago being just 1 per cent. Stocks of zinc on the first of December totaled 31,000 tons, compared with 26,000 tons a month before and 19,000 tons a year ago, the increase over a year ago being 59 per cent.

World visible supply of tin on the first of December amounted to nearly 20,000 tons, compared with nearly 21,000 tons a month before and more than 25,000 tons a year ago, the decrease from a year ago being 23 per cent. United States visible supply, including afloat, is about 9,000 tons.

Brother Allen from South Dakota Disagrees With Brother Frye from Tennessee.

Figures Do Not Lie, but You Must Draw Them Right if You Want the Right Answer.

FOR a while it looked as if Harry Frye had all the sheet metal workers scared with his problem of pipes, because he wanted definite proof by the geometric method.

But now comes A. A. Allen, one of our good friends in South Dakota, who is inclined to think that he knows as much about mathematics as does Mr. Frye.

Here is his very interesting letter and also a drawing to illustrate his argument:

To AMERICAN ARTISAN:

Just a little friendly chat with Harry Frye.

In your December 8th issue, on page 25, friend Harry says he knows he is right in his problems of circles, but wants it proved by geometry.

In your November 24th issue, J. F. Buckwalter gave him that solution by geometry.

In your December 8th issue, Harry says that the triangle in the old rule of Pythagoras is not like his, which is true; the old thing is perfect as each side is the radius of the circle wanted, while with the

two triangles to each circle of his problem, there is but one side that is of value, and this is the same in both triangles, i. e., the hypotenuse which is our radius and was the first thing we used.

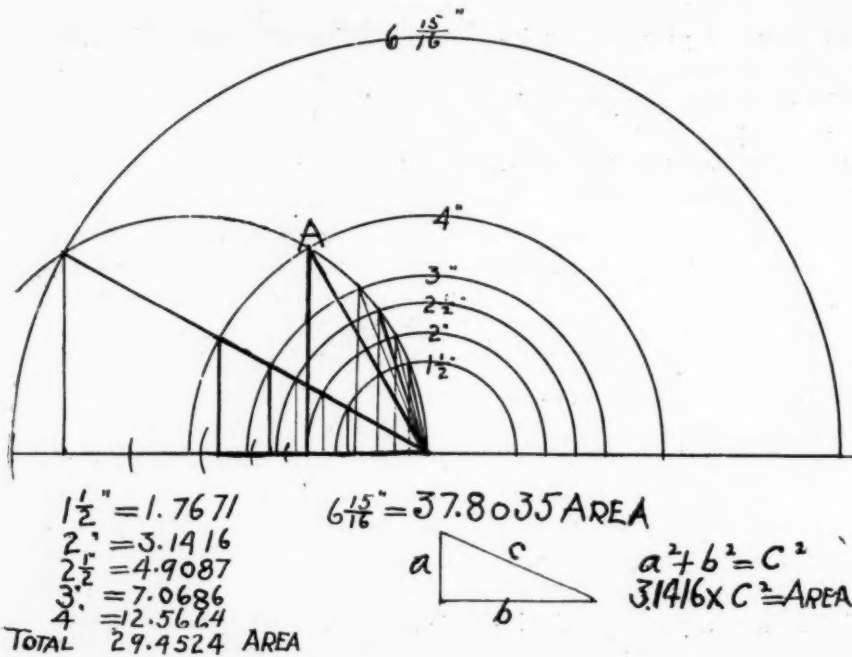
I have drawn Harry's problem of circles and I choose respectively a $1\frac{1}{2}$ -inch, 2-inch, $2\frac{1}{2}$ -inch and 3-inch circle, with 4-inch circle A or starter.

The combined area of these circles is 29.4524 square inches.

By using his method of stretch-out to obtain the largest radius we find a circle of 37.80035 square inches area which is 8.3511 square inches larger than required; in other words, would carry another circle of about $3\frac{1}{4}$ inches diameter.

So you see, friend Harry, your method is limited to three circles and a common square will give you all this more quickly.

Say on the short side of the square we choose 6 inch radius and on the 24-inch side we choose 8-inch radius; then we measure from the 6-inch to the 8-inch and we have a 10-inch radius; our circles would



Working Out the Problem for Brother Frye.

be 12 inches, 16 inches and 20 inches and the areas 113, 201, 314 square inches.

In the illustration I have marked the triangle thus: a for altitude, b for base and c for hypotenuse.

By squaring a and b, and adding together, we have the square of c; to get the true length of c we must extract the square root. After doing all of this, we have obtained what we used the first thing—the radius.

The combined area of "A" group of triangles does not equal the combined area of longest radius group inside and including the a circle, and this group does not equal the area of the longest radius triangle, proving the error.

Very truly yours,

A. A. ALLEN,
1209 South Main Street, Aberdeen,
South Dakota.

A Difficult Location in Metal Ceilings*.

Along about 1888 or 1890 the several corrugating and iron roofing manufacturers throughout the United States began giving iron ceilings their attention. The first effort in that direction was to get a nice

appearing ceiling, all iron and at a minimum price.

Paneled ceilings first came into vogue made from 8-foot sheets, with $\frac{3}{8}$ -inch corrugations. On some ceilings they were laid alternating, with 8-foot beaded iron sheets. Two-inch wood strips were nailed over the side lap of each sheet, and an iron boxing tacked over the strips; a rosette or medallion was nailed on each corner, covering cross joints, all of which was finished at the juncture of the ceiling with the wall by an O G or cove cornice.

At that time a perplexing dilemma for most workmen was to get a mechanical appearing finish on the end of a sloping wall under the stairway. It was pointed out later by some craftsman that the same width cornice on a sloping wall would never finish properly with one on a straight wall, and that the remedy was to box up (either skeleton or solid) the top end of the stairway to a depth that would continue the cornice straight around the stairway with square mitres.

Don't think complaining customers enjoy making kicks. Most of them hate to come back to ask for an adjustment and many who would be justified in coming say nothing and swallow a loss.

Notes and Queries

Aluminum Solder.

From I. R. Keller, Upper Sandusky, Ohio.

Kindly inform me where I can get aluminum solder.

Ans.—George E. Roesch, 386 New York Street, Aurora, Illinois; L. B. Allen Company, 4536 North Lincoln Avenue, Chicago, Illinois; M. B. Austin and Company, 406 Jackson Boulevard, Chicago, Illinois; Indiana Smelting and Refining Company, East Chicago, Illinois.

Combination Electric and Wood Stove.

From George MacKay and Company, Ocala, Florida.

Who manufactures a combination electric and wood stove?

Ans.—The Magee Furnace Company, Boston, Massachusetts.

Stamped Panels—Already Enameled.
From R. A. Grim, 509 Malden Avenue, Seattle, Washington.

Where can I get both oven door and high closet door stamped panels already enameled?

Ans.—Coöperative Foundry Company, Rochester, New York; Enamel Products Company, Cleveland, Ohio; Vitreous Enameling Company, Cleveland, Ohio.

Instrument to Test Velocity of Draft in Chimneys.

From Orton and Ault, Wadsworth, Ohio.

Where can we get an instrument to test the velocity of the draft in chimneys?

Ans.—E. Vernon Hill Company, 64 West Randolph Street, Chicago, Illinois.

Lawn Mower Grinders.

From Ludwig Sheet Metal Shop, Chilli-cothe, Illinois.

Kindly advise us who manufactures lawn mower grinders.

Ans.—Coldwell Lawn Mower Company, Newburgh, New York; Fate-Root-Heath Company, Plymouth, Ohio; Luther Grinder Manufacturing Company, 285 South Water, Milwaukee, Wisconsin.

Sheet Metal School.

From S. J. Hacker, Urbana, Iowa.

Where can I take a course in sheet metal pattern drafting and orthographic projection?

Ans.—St. Louis Technical Institute, 4543 Clayton Avenue, St. Louis, Missouri.

*Written especially for AMERICAN ARTISAN by L. S. Bonbrake, County Hospital, Peoria, Illinois.

Shaw Pays Tribute to Boys "Over There" from Appanoose County with Colorful Military Window.

Window Was Arranged for Armistice Day, But it Would Serve Equally Well for an Attractive Memorial Display.

IN THE November 3rd issue of AMERICAN ARTISAN AND HARDWARE RECORD we made a strong appeal to retail merchants to decorate their windows for Armistice day. Many of them did so, and we are illustrating one by Everett A. Shaw, Centerville, Iowa.

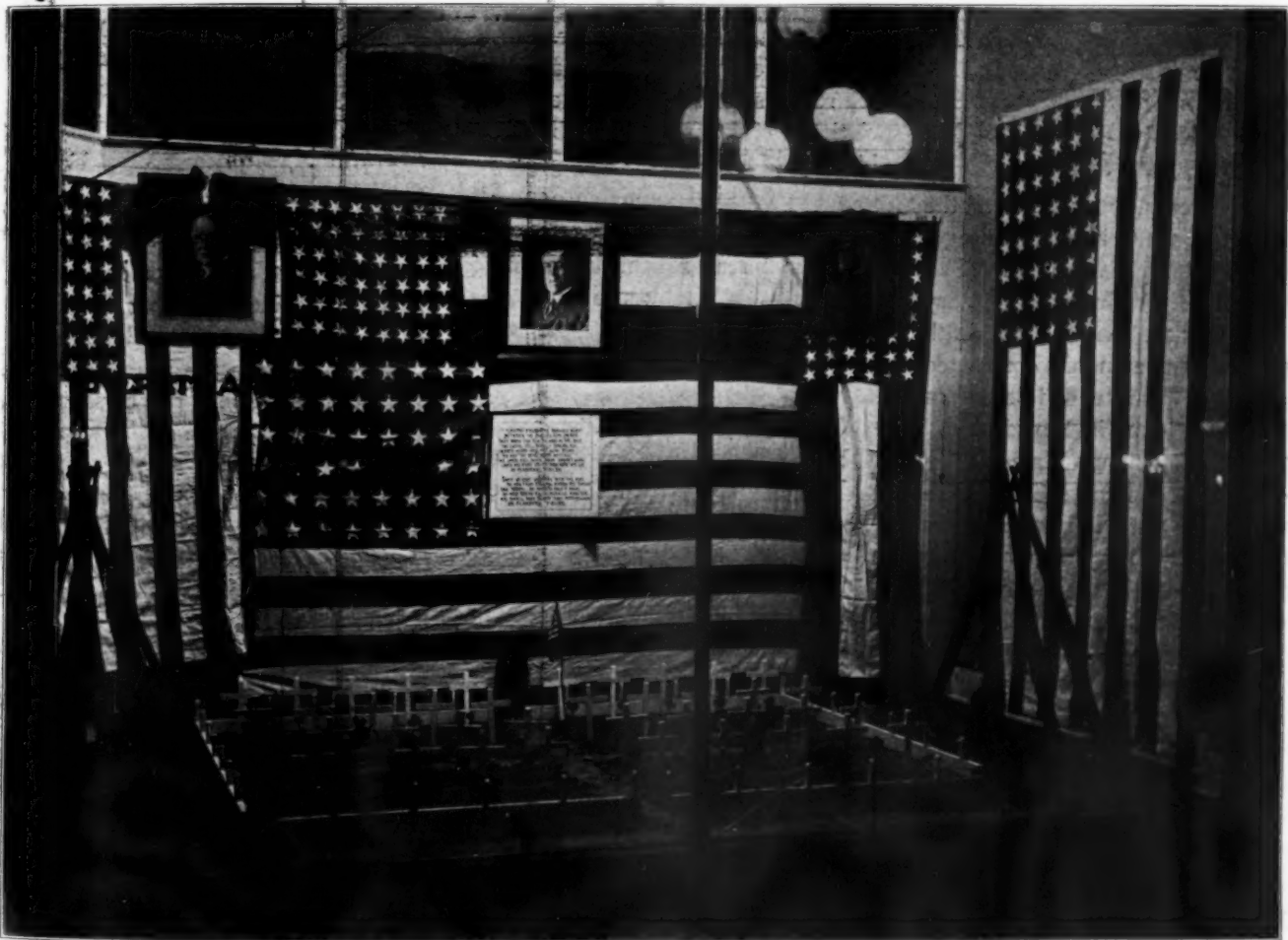
Mr. Shaw is a progressive hardware dealer and is constantly on the

On the floor is placed dried moss dyed green, which Mr. Shaw procured from a greenhouse. The walks are made of gravel, while two toy cannons are placed before the main gate as a silent guard. The "stacked" guns on either side were borrowed from a local military company.

The poem, "In Flanders Field,"

made of 1x2-inch stock, with parting stop for the posts and furnace chain stretched around it, the whole painted white. Three artificial pine trees are seen, two in the foreground and one near the back.

A flag pole is placed in the center of the two walks, with a flag raised. This flag should have been lowered to half mast, however.



Armistice Day Window Display Arranged by Everett A. Shaw, Centerville, Iowa, Which Generated a Great Deal of Publicity for the Store.

alert for new and attractive methods of drawing attention to his store.

Here Mr. Shaw has reawakened a historical event uppermost in the mind of the public by placing a cross in the window for each man from Appanoose County who died in France.

is seen just below the picture of Ex-President Woodrow Wilson.

The draped picture of the late President Harding and that of General Pershing, commander of the American forces in France, are also appropriately shown.

The fence around the cemetery is

Mr. Shaw has the following remarks to make regarding his window displays:

"I am spending much time on my windows and I have the people sitting up and listening.

"I also made an attractive Thanksgiving window. On one side I had

an enormous fireplace with all the old-fashioned pots, pans and a 105-year-old gun on the mantel. A deer head hung above a 150-year-old Bible; fur rug on the floor, with corn, popcorn and long green tobacco hanging around. Old-fashioned chairs and grain cradles. Nothing less than 75-year-old things were used. Dishes were 150 years old. On the other side I used a modern fireplace, with reed furniture, Winchester pump guns, breezy story magazines and such 'dope,' electric candle sticks for light and all modern labor-saving devices.

"I have had so many good compliments on my windows. My idea is to get something new and attractive and have been doing it."

Rehm Hardware Company Head, Chicago, Passes Away on Eve of Departing for Florida.

George Rehm, President of the Rehm Hardware Company, Chicago, Illinois, died at his home in Oak Park, Illinois, Wednesday, January 16, after a short illness. His death resulted from pneumonia, contracted on the eve of his intended departure to his winter home in Florida.

Mr. Rehm was born May 4, 1850, and resided at Downers Grove, Illinois, until the age of eighteen, when he entered the employ of his brother Andrew, who at that time conducted a retail store in Blue Island Avenue, Chicago. Two years later, Mr. Rehm assumed an interest in the business and later, with his younger brother Daniel, acquired ownership of the business.

For a number of years they continued under the partnership name of G. & D. Rehm, and in 1905 incorporated as the Rehm Hardware Company, at which time the business became exclusively wholesale. Mr. Rehm was elected president and held his office until his death, having thus been actively engaged in the hardware business for 56 years.

The high esteem in which he was held by his associates and the hardware fraternity in general, with which he was so long associated, was evidenced on every hand during

this long career, and especially during his short illness.

Mr. Rehm had a gentle and kindly disposition and made friends readily. He was always cool and deliberate in judgment, and just in his decisions and dealings. Under his able direction the company enjoyed a wonderful growth.

Ten Reasons for Belonging to an Association and Why You Should Attend Conventions.

Here is an invitation to attend the Twenty-eighth Annual Convention and Hardware Exhibit, to be held at Milwaukee, Wisconsin, February 6 to 8.

Some clever Wisconsin retailer, and I am going to give Mr. Christianson the credit, devised a set of ten reasons for belonging to an association. If I am in error about the identity of the author, I hope some one will be kind enough to correct me for posterity's sake.

When I read a bankrupt's list of creditors and find more than one merchant stuck by the same man, the moral shrieks louder than a callopie.

All of us know more than any of us; few of us realize how little most of us know about the daily business of each of us until we begin to meet the rest of us and talk things over among the lot of us.

It's fear that's at the bottom of most of our troubles—fear of competitors, loss of business, of failure. Even timid animals are brave when they run in packs—and they make a larger kill.

Merchants suffer more, in mind and estate, from lies told them about one another by their customers than from any other cause—and there is just one obviously sensible cure for that.

More or less wise old Ben Franklin said: "We must hang together or hang separately."

No, cousin, your problems are not "peculiar." You fellows have the same perplexities, and why waste time and money blundering into a solution alone, when you can get help by being willing to give help?

Merchants are all in the same boat—very few ever advance much in profits and prosperity except as the trade as a whole advances. Pull together for the good of all and bring prosperity to you much quicker.

You think your competitor a scoundrel—but he thinks you a crook. Both equally right, of course—but it's when thieves fall out that they get into trouble.

Civilization itself is organization. What good reason can any merchant give for remaining in his own little business cave, a prey to every beast of trade, when he could find added safety and prosperity in combining with his fellows?

I once helped a blind man across the street, and lo! I was safely across myself as well. His cane had found a mudhole that I did not see.

Machine Appliance Corporation Announces Price Changes February 1.

In a special announcement issued by the Machine Appliance Corporation, 351 Jay Street, Brooklyn, New York, that firm calls attention to a reduction in the list price of some of their principal items. A new price list more favorable to the trade, effective February 1, 1924, has been arranged.

The company announces especially that all eyelets in the future must be ordered by the carton instead of by the box. This will be to the advantage of all concerned. Heretofore many dealers have ordered only sufficient eyelets to take care of an individual customer's order and consequently were not in a position to fill re-orders without causing embarrassment and delay to their customers when they re-ordered eyelets.

Thirty Years of Increasing Satisfaction.

TO AMERICAN ARTISAN:

I have been a subscriber to AMERICAN ARTISAN for over thirty years and I like it better every year.

A. R. NASH.

Arlington, South Dakota.

Dodd Advocates Budgeting Business Before Indiana Hardware Men Convening at Indianapolis, Jan. 29 to Feb. 1.

Stresses Necessity of Basing Future Plans on Past Experience—President Jones Too Ill to Attend.

THE initial session of the Twenty-fifth Anniversary Convention of the Indiana Retail Hardware Association took place in the Assembly Hall of the Claypool Hotel, Indianapolis, Indiana, Tuesday, January 29, with First Vice-President G. W. Daugherty presiding. The invocation was read by H. C. Heldt, Oakland City.

President George A. Jones' message was read by Mr. Daugherty.

Address of President George A. Jones.

A quarter of a century ago, recognizing the necessity of closer cooperation, this Association was brought into existence. We have met here on this twenty-Fifth consecutive annual convention as unmistakable evidence of the true American principles for which this organization stands. Such principles were recognized by the founders of this Association, nineteen in number. This small number has grown now to over a thousand and such growth speaks well for the efforts of all of the officials of this Association and also its membership.

At this time, the beginning of the year 1924, there is manifest necessity for hearty cooperation and careful merchandising on the part of all classes of merchants.

How We Should and Do Treat Our Competitors.

This, then, leads us to some consideration of the relationship between competitors, the old idea which was prevalent in times past, that a competitor was an undesirable rascal who wore horns, is past and has been outlived by a new relationship or a new idea or rather truth, which is that a competitor is not a nuisance to trade, but is rather a necessity. Truly, there is ample room for both, if prudent service is rendered and each will succeed upon his own merit and not upon the wreck or failure of the other.

During the last twenty-five years this organization has promoted and established many valuable and lasting friendships. Its greatest service has been to set right its members and its business associates in their relationship with one another, and with the business world.

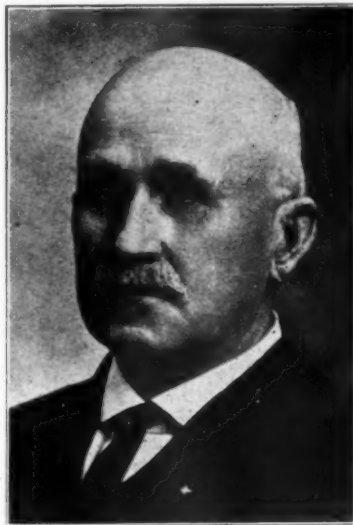
Giving Store Service.

Every store has its effect upon its community. The atmosphere in the store created is disseminated according to the extent of its trade. That man who takes pride in his store has the pride shared by his patrons and customers. Therefore every merchant should give consideration and thought to his store service. This is important in store success. In turn, store service is greatly affected by display and atmosphere. It should be easy for a customer to get in and just as easy,

when his business transaction is through, for him to get out.

1924 Business Outlook.

What of the outlook for the coming year? Certain phases of business are sound, but others are unsound. The hardware business may be said to be fairly sound, however it is closely related to some classes of business which are now unsound, yet it is a substantial business when compared to many others. There is, however, opportunity for great improvement especially to the extent, which is not small, that its condition depends upon the condition of the farmer. This is one of the present weak spots in general business and its effect upon the hardware business is very manifest.



George A. Jones,
Retiring President Indiana Retail Hardware Association.

ware business is very manifest. The outlook indicates some substantial relief with building, agricultural, industrial and commodity demands looking good. Also, hardware markets depend less upon agricultural prosperity and more upon basic iron and steel prices.

Considering the small inventories generally now maintained as compared to business in sight the matter of prices should be fairly well maintained and the turnover fairly rapid. However, the public mind is ripe for an insistence for lower prices at retail. This will most certainly be in line with the present demand for tax reduction. The buying public seems to have bought a fairly good supply and can therefore wait for some price reduction. This is more true in industrial centers than in rural communities and small towns.

Don't Advertise Mail Order House by Complaining.

There are several advantages which a local merchant has over any mail order house. He has the opportunity of doing

business with the buying public during all the hours of the business day when the public is on business bent; the mail order house is forced to take the after hour period, that portion of the day after business, when the buying public seeks pleasure and rest. Why not take advantage of this period which covers ninety per cent of the time? Also, mail order houses' main stock in trade is price. Have we not sufficient instruments to use against this one item? As a matter of fact we can frequently equal their price. However, let us use service, personal contact and education. When quality of goods, inspection before purchase, time of paying, adjustment, delivery and personal contact with the purchaser are all considered together with the service which the local merchants renders to the community with the taxes which he pays are all considered, the matter of a small difference in price is usually overcome. Do not advertise the mail order houses by complaining about it, but rather advertise your own business by telling about it and its service.

There are many other things well known to each of you, each of which vitally affects business and which should be considered at this convention. But time forbids my small effort at any analysis of a greater number. Therefore I leave to you the fuller and more complete consideration of the topics which I have merely suggested and close by thanking you for your cooperation during my brief year of service and your attendance here today and beg to close with this thought: He profits most who serves best.

Alvin E. Dodd, Manager Domestic Distribution Department Chamber of Commerce of the United States, Washington, D. C., gave an address on "Hardware Distribution Problems."

Mr. Dodd spoke in part as follows:

"I need not," he said, "call attention to what happened during the world war, but I wish to call your attention to the drop in prices for about thirty years and the rise in prices for about twenty years between 1816 and 1862, which is repeated almost exactly in the period from 1874 to 1916. This is too remarkable to be a coincidence and is merely another evidence that history repeats itself inevitably, no matter what an individual or a class of individuals may attempt. There is a close resemblance to the peak of 1868 and the peak to which we are climbing in 1924. We do not know, of course, what the future holds for this present upward tendency but experience tells us to look out for the inevitable drop."

The hardware dealers were urged to take steps to collect information relating to their own trade which

would enable them to mark its trend and take the measure of future growth. There was nothing he said, in the anti-trust laws to prevent the formation of organizations for this purpose.

Mr. Dodd displayed a chart showing the trend of wholesale prices for the last 115 years, calling attention to the fact that the period between the war of 1812, or the Napoleonic wars, and the civil war was almost exactly the same as the period between the civil war and the world war.

Mr. Dodd emphasized the necessity of budgeting the business, and in closing he paid a high compliment to Mr. Sheets.

Following the talk by Mr. Dodd, National Secretary H. P. Sheets very clearly explained the establishment of a Retail Research Division, which was followed by the report of the constitution and by-laws, by A. G. Broadie, Williamsport.

"Some Things Hardware Men Should Know About Hardware Tendencies," was the topic of discussion by Paul J. Stokes, Manager, Research Division, National Retail Hardware Association. Mr. Stokes said that hardware wholesale prices are higher as compared with general commodity prices. He said that hardware sales had not increased in as high proportion as general sales nor as high as value of farm products.

At this point in the discussion Mr. Sheets stated that he was preparing statistics and was putting them in easily understood charts.

A letter from President Jones was read by Secretary G. F. Sheely to the effect that President Jones regretted his inability, due to illness, to attend the convention. The illness of the President is a serious one caused by a fall last April.

A message of good cheer was sent President Jones by the Association.

It was noted that several changes have been made in the constitution and by-laws of the Association in the last twenty-five years, among which is the consolidation of the Secretary and Treasurer's offices.

The Wednesday session took place in the Assembly Hall of the Claypool Hotel.

The report of Secretary G. F. Sheely was the first to be heard. Secretary Sheely emphasized the fact that the business sessions were



Charles E. Hall,
Retiring Treasurer Indiana Retail
Hardware Association.

held in the morning, which left the visitors with the afternoon to visit the exhibits.

The financial report was made by W. L. Hubbard, Scottsburg, Chairman of the Auditing Committee.

The simplification of hardware lines and elimination of waste through the standardization of sizes, brands and patterns, was stressed as one of the outstanding needs for the development of the hardware trade by Herbert P. Sheets, Secretary-Treasurer of the National Retail Hardware Association, in his address Wednesday forenoon.

The stock turnover of the average hardware merchant is not as great as it should be, Mr. Sheets said. Almost every store, he said, has its obsolete and unnecessary quantities of goods, representing an unproductive investment oftentimes extending to several thousands of dollars.

Capital Not Working.

"It is a matter of common business knowledge that in turning his stock only

about twice a year the hardware merchant is not making his capital work as it should," Mr. Sheets said.

"If the efficient grocer can get eight, ten or twelve turns, it surely should be possible for the hardware man to turn his stock four or five times. Some are doing it.

"Such results can come, however, only from finding and eliminating dead stock and duplicating lines, the reduction of unnecessary surplus, and careful judgment and selection in buying.

"Capital tied up in obsolete and slow-moving merchandise has little opportunity to earn a profit, and profit is the objective of business investment.

"Reducing stock through the elimination of the unnecessary makes possible more convenient arrangement and better display of merchandise, lowers insurance and other costs, and permits greater concentration in selling.

"The more rapidly stock is turned, the smaller the investment required and the easier the business can be financed. Borrowing can be curtailed, interest saved and cash discounts more easily taken. The released capital can be used to add new lines, more complete assortments, or for other investment.

"Increasing stock-turn makes the money invested in the business work harder and earn more, and reduces the shrinkage of values which is always an important factor in merchandising.

Standardization Advised.

"The standardization of hardware lines is one of the biggest steps toward eliminating waste," Mr. Sheets continued. "The number of styles in woven wire fence has been reduced from 552 to sixty-nine, and in files and rasps from 1,351 to 496. A movement is now under way to reduce the number of paint colors and I believe the hardware dealers should not display more than twenty-four colors."

Frank Stockdale, of Chicago, will speak at the meeting Thursday on stock turnover. Howard J. Wischaupt, of Cleveland, will speak at the closing session Friday on "The Human Element in Business."

The Question Box was opened following the address of Mr. Sheets, and a discussion on "Simplification" was taken up. This discussion delved into the ways and means whereby the hardware merchant could effect a simplification of his lines.

The election of officers for the coming year created a warm, but friendly contest.

Election of Officers.

The following named men were elected to office for the ensuing year:

President—G. E. Daugherty, Princeton.

First Vice-President—H. E. Magee, Winchester.

Second Vice-President—L. W. Slayter.

Secretary - Treasurer — G. F. Shely, Indianapolis.

Field Secretary—C. W. Helger-son, Indianapolis.

The Board of Governors will supplant Board of Directors so as to be consistent with revised constitution.

The Board of Governors is made up of the officers, with B. J. Barker, S. G. Darter and Cecil Miles in addition.

Ladies Royally Entertained.

A number of special entertainment features had been arranged for the visiting ladies.

Members of the women's entertainment committee were: Mrs. Harry Barrett, Mrs. Harry Reed, Mrs. Homer Rettig, Mrs. J. R. Chalk, Mrs. George C. Stacy, Mrs. W. E. VanTage, Mrs. William Emerich, Mrs. Frank Prunk, Mrs. Edward Madinger, Mrs. Benjamin Helkema, Mrs. Henry Henzerling, Mrs. Harry Gage, Mrs. Robert Walden, Mrs. A. J. Pfeifer and Mrs. George Scherer.

* * *

Seen and Heard at Indianapolis Conventions.

Harry Neal has worked out a fine demonstrating model to prove his argument that the Victor Heat Deflecting Steel Furnace actually delivers more heat into the pipes, and all their salesmen have one of these miniature furnaces in their outfit. It is worth while seeing how it works. Charlie Hall and William Winchester helped him in their exhibit.

S. F. Brown had charge of the Farquhar Furnace booth and had plenty to do demonstrating this high grade heating plant.

In the Peninsular stove exhibit F. K. Learned and C. L. Thompson had many visitors.

T. J. Cornwell and D. A. Barnes were busy telling about the Lorain burner on New Process oil cook stoves.

Leslie R. Taylor and Reid Mackin evidently have many friends among the Hoosiers, for their progress through the aisles of the Tabernacle was frequently interrupted.

E. E. Kunkel and Frank Byrnes were busy and happy in the Indiana Stove Company's exhibit of Darling stoves and ranges.

The Excelsior Steel Furnace Company was ably represented by W. R. Lawson, Preston Barnes and Arthur Glessner—Charlie's brother, you know.

The Allen Manufacturing Company had many interested visitors to look at their enameled parlor furnace and Allen ranges.

Charlie Gohman was "present in person," along with his two cracker-jacks, J. M. Shoemaker and C. M. Harmon. Their Pointer ranges sure did look fine.

H. O. McElwain and R. T. Was-son presided ably over the exhibit of Torrid Zones of the Lennox Furnace Company. Mrs. McElwain bossed the job.

The patriarch of the XXth Century Heating & Ventilating Company and his son spread cheer and furnace information in their booth. Old man Voorhees and "G. A." had plenty to do.

The fine exhibit of the Fox Furnace Company was presided over by Charlie Bartholomew, W. R. Cameron and E. H. Skinner. Their new Sunbeam Cabinet heater created much favorable comment.

"Pop" Ross of the Henry Furnace and Foundry Company circulated among the crowd and greeted many friends.

The Wheeling Corrugating Company had a very complete showing of their ovens, elbows, gas radiant heaters and other products. R. M. Jacob and W. H. Nesbit were in charge.

In the booth of the American Steel & Wire Company, H. C. Gelatly, L. G. Orr, B. A. Swindell, Frank Fuller, R. B. Hodgins, J. W. Meeker, Jr., and H. A. Squibbs did the honors in their usual style.

Irving Ellis was sure a happy fellow. He had lots of visitors to his exhibit of the beautiful Copper Clad Malleable Ranges.

When I approached the Front Rank booth, I noticed a fellow with a fuzzy hat wielding a paint brush. Harry Beaman and C. P. Brown

were out in the aisle talking with a couple of customers. The painter turned out to be E. B. Langenberg. "E. B." isn't afraid of soiling his little hands, so long as the sales keep on mounting.

Fred F. Foster, ably assisted by Arthur Lamneck, had supervision over the Lamneck exhibit of wall stacks, corrugated stove pipe elbows, registers, etc.

Scott Bowen and his charming wife presided over the Monarch and Paramount exhibit of electric, gas, coal and combination ranges, with John Peters filling in when the crowd got too thick.

"Dick" Weichert's little brother, Arthur, had a few kind words to say about Red Front furnaces.

John R. Brower and E. W. Klein must have a stand-in with some good Quick Meal customer among the officials of the Association, for they had the softest cushions in the chairs in the whole Tabernacle—and I noticed that their visitors liked to linger. Klein expects to have the same kind of cushions at the show in Grand Rapids, Michigan.

J. E. Hedges was the proud and dignified boss of the exhibit of Majestic Malleable ranges.

Jim Triggs, D. A. Purviance, Guy Ackerman and H. M. Clifton had all they could do to take care of the visitors to their exhibit of Majestic furnaces, coal chutes and duplex registers.

The Home Stove Company made a fine showing with their Model steel furnaces, ranges and heaters. C. M. Orr and G. A. Keeney were in charge.

The beautiful white enameled steel furnace of the Kruse Company had many admirers. "Bob" Kruse and his able assistant, Frank Beeth, took care of the visitors.

F. S. Gottschalk, of the Utica Heater Company, divided his time between the hardware show and the meeting of the sheet metal contractors down at the Severin Hotel.

And altogether it was a tough job for the furnace and sheet metal salesmen to take care of both meetings, for the attendance at both meetings was unusually good.

New York State Retail Hardware Men to Convene at McAlpin Hotel February 19 to 22.

Fundamental Business Situation and Outlook to Be Discussed by Ray Vance.

THE New York State Retail Hardware Association will hold its annual convention in the Hotel McAlpin, New York City, February 19 to 22, 1924. A tentative program of the proceedings is given hereinafter:

Tuesday Morning, February 19, 1924.

Convention opened by President Atkinson.

Invocation, Reverend Andrew J. Meyer, Brooklyn.

Address, Murray Sargent, Sargent & Company, Chairman Executive Committee American Hardware Manufacturers' Association.

Address, "What Makes Success or Failure in the Hardware Business?" Honorable Hamp Williams, President National Retail Hardware Association.

Address on distribution problems, introduced by L. H. Bronson, of Bronson & Townsend Company, New Haven.

Two retailers will follow Mr. Bronson on the same topic.

"The Hardware Traveler," Herbert R. Connor, of Pike Manufacturing Company, Chief of Hardware Boosters Company, New York City.

Wednesday, February 20.

Reports of officers—Treasurer, Advisory Committee, Secretary.

Topic for the day, "Simplification."

National Secretary H. P. Sheets will introduce the subject in his address on "Waste."

He will be followed by John N. Williams, of Fayette R. Plumb, Inc., Philadelphia, and E. F. Phillips, Devoe & Reynolds Company, New York.

General discussion and conclusions.

Report of delegates to 1923 National Hardware Congress, H. A. Cornell, Brooklyn, senior delegate.

"Fundamental Business Situation in This Country Today and Its Bearing on the Business Outlook for 1924," Ray Vance, Secretary of Brookmire Economic Service of New York.

Discussion of Mr. Vance's address, in which he will participate.

Thursday, February 21.

"The Three Graces—Expense, Margin, Profit"—Expense, Martin Van Dussen, Rochester; Margin, William H. Gieseler, Brooklyn; Profit, E. A. Mahoney, Schenectady, New York.

"Business Fundamentals as Applied to the Hardware Business," by B. Christianson, Assistant Secretary Wisconsin Retail Hardware Association.

Discussion by the convention following these talks.

"The Hardware Trade Press—Its Achievements, Service and Responsibilities," Roy F. Soule.

Friday, February 22.

Reports of committees and election of officers and delegates to 1924 Retail Hardware Congress.

Address, appropriate to the holiday, Honorable Edmund H. Machold, Speaker of the Assembly of New York State.

Questions on submitted topics, answered by selected members of the association.

Question on Incorporation for Retail Hardware Stores; Its Advantages and Disadvantages, presented by George R. Brennan of counsel for Brooklyn Hardware Association.

Exposition will open at 71st Regiment Armory at 10 a. m., Tuesday, February 19th, and each day thereafter until Friday. Hours each day, 10 a. m. until 10:30 p. m.

Annual banquet of the association will occur at McAlpin Hotel Thursday night, at 7 o'clock. The dinner will be followed by dancing.

The entire exhibit hall has been sold since January 1st and applications are now impossible to fill.

Tregoe Says Mellon Taxation Program Favorable to Business in 1924.

Touch a man's pocketbook and you touch his heart.

There is perhaps no question coming before the national public which grips the interest more firmly than taxation, either increased or decreased. The school boy unexpectedly "stuck" with an American history "exam" needs only to go in for a long harangue about taxation to make a "hit" at least nine times out of ten.

J. H. Tregoe, Secretary-Treasurer of the National Association of Credit Men, views the Mellon taxation program in a favorable light.

"The moral questions surrounding taxation are just as definite and serious as are the material questions.

"Financing our participation in the World war, leading to the creation of a debt many times larger than any debt ever incurred in the Nation's career, and with a budget several times larger than the pre-war budget, caused largely by increased costs of commodities and service, has brought us eventually into a situation where federal taxation is a serious problem.

"Whether it be federal, state or municipal taxation, the burden falls

largely upon business. We may be patient in a situation like this, but it becomes very irksome and produces a psychological effect reacting more and more upon the vitality of business.

"In looking after the welfare of the people, and I extract this thesis from world history, nothing proves more beneficent nor a greater stimulant to an enterprise than the lessening of the tax burden.

"With these outstanding facts in mind, I do not hesitate to say that nothing more epochal has happened in our governmental career during the past five years than the suggestions offered by Secretary of the Treasury Mellon for a reduction of the taxes. 'The rich must pay,' is a popular slogan. But if the rich can evade payment, they are apt to do so, just as taxation is evaded in many instances by those of smaller incomes.

"Why hold to high surtaxes when it is merely driving income into unproductive channels? To illustrate, in 1916, 292 incomes were reported of more than one million. In 1923 it is estimated that no more than thirty will be reported. This does not indicate any diminution of income, but merely proves that the high surtaxes have driven income into nooks and corners where the taxation process cannot reach it. Tax-exempt securities issued mainly for unproductive purposes have been availed of, while production has need of the capital and will need it in a larger measure as our opportunities for production expand.

"It seems to me, therefore, that the suggestions of Secretary Mellon represent the careful thought of a very fair and analytical mind. They represent the proposal of a cabinet officer who is thinking of the people.

"Every business man of the Nation should line up squarely for this program of reduced taxation. Congress should be permitted to hear the voice of the people."

Advertising is the science of shooting a buy-suggestion into the mind of a perchance customer.—*Horatio Sawyer Earle.*

Nebraska Retail Hardware Association to Hold 4-Day Convention at Lincoln February 5 to 8.

What Member Gets for His Money and Advertising Costs to Be Topics Under Discussion.

THE Nebraska Retail Hardware Association will hold its twenty-third annual convention at Lincoln, Nebraska, February 5 to 8. The headquarters will be the Lindell Hotel.

Reduced railroad fare on the certificate plan can be had from all points in Nebraska and Julesburg, Colorado. As the reduced rate is contingent upon a certain number of validated certificates, every member should secure a certificate. Even though the saving to him may be negligible, it will mean much to those coming from a distance. Each member should secure the certificate for reduced fare from his local agent.

The program follows:

Tuesday Morning, February 5.

8:30 a. m.—Secretary's office, lobby floor, Lindell Hotel. Distribution of badges. Payment of dues and all other business pertinent to the convention.

10:00 a. m.—Opening of the Twenty-third Annual Convention of the Nebraska Retail Hardware Association by President F. M. Housh, Neligh, Nebraska.

Song, "America," directed by Charles R. Putney, Lincoln, Nebraska.

Invocation, Dr. D. J. Ferguson, Alliance, Nebraska.

Address of welcome, Honorable Frank C. Zehrung, Mayor of Lincoln.

Presentation of gavel, F. W. Ebinger, Plainview, Nebraska.

President's address, F. M. Housh, Neligh, Nebraska.

10:50 a. m.—Introduction of National officers.

Secretary-Treasurer's report, George H. Dietz, Lincoln, Nebraska.

11 a. m.—Report of Legislative Committee, S. A. Sanderson, Lincoln, Nebraska.

11:15 a. m.—"What Does the Member Get for His Money?" Perry F. Nichols, Indianapolis, Ind.

11:45 a. m.—"Stock Turn and Its Advantages," Frank M. Phillips, Hoskins, Nebraska.

Tuesday Afternoon, February 5.

1:00 p. m.—Hardware Exposition at Municipal Auditorium, open from 1:00 to 10:00 p. m. to members.

Entertainment.

7:00 p. m.—Beginning promptly at 7 o'clock on this evening, exhibitors will be entertained for one hour with an Orpheum musical program.

Wednesday Morning, February 6.

As in the past, each session will be open promptly at the scheduled hour.

9:15 a. m.—"Distribution," discussed by a manufacturer, F. M. Coatsworth; discussed by a jobber, R. M. Joyce; discussed by a retailer, A. L. Lahr.

General discussion and conclusions.

10:15 a. m.—"Waste," with particular reference to the present status of paint simplification and the presentation of some facts that dealers should know about unnecessarily large paint stocks, Perry F. Nichols, Indianapolis, Indiana.

10:30 a. m.—"The Hardware Dealers' Trip Back to Jericho," Tom N. Witten, Trenton, Missouri.

11:20 a. m.—"Business Trends," John W. Gamble, Omaha, Nebraska.

1:00 p. m.—Exposition at Municipal Auditorium open to members. Free to public from 6:00 to 8:00 p. m.

Insurance Meeting Wednesday, February 6.

2:00 p. m.—The annual meeting of the Nebraska Hardware Mutual Insurance Company.

Reading of minutes of last annual meeting.

Address, President H. J. Hall. "Hardware Mutual Insurance," George M. Gray, Secretary Ohio Hardware Mutual Insurance Company, Coshocton, Ohio.

Secretary-Treasurer's report. Election of Board of Directors.

Anton Hanson, Upland, Nebraska; M. D. Hussie, Omaha; Frank McCreary, Scottsbluff; S. E. Galloway, Loup City.

Entertainment.

2:00 p. m.—The visiting ladies and ladies of the Lincoln Hardware Club will meet in the Lindell Hotel parlors and be escorted by the ladies of the local Entertainment Committee as guests of the Lincoln Hardware Club to Liberty Theater.

8:30 p. m.—Dance at the Chamber of Commerce under the auspices of the Lincoln Hardware Club for Association members, exhibitors and their ladies. Music by Belshaw's Orchestra.

Thursday Morning, February 7.

9:15 a. m.—"Trade Ethics," Dr. D. J. Ferguson, Alliance, Nebraska.

"Salesmanship," George M. Gray, Vice-President National Retail Hardware Association, Indianapolis, Indiana.

"Business On the Other Side," Will Owen Jones, Editor of the *Nebraska State Journal*, Lincoln, Nebraska.

10:45 a. m.—"Simplification," O. A. Brock, Peoria, Illinois.

11:05 a. m.—"Advertising Cost as It Affects Merchandising," E. J. Clynh, Lincoln, Nebraska.

11:30 a. m.—"Does National Advertising Reduce the Cost of Distribution?" G. E. Shaver, Winner, South Dakota.

11:45 a. m.—"Confidence Very Necessary in the Retail Business," O. A. Rystrom, York, Nebraska.

Thursday Afternoon, February 7.

1:00 p. m.—Exposition at Municipal Auditorium open to members until 6:00 p. m.

6:30 p. m.—Banquet at Chamber of Commerce for Association members and their ladies. Secure your tickets at the Secretary's desk before the business session opens Thursday morning.

Toastmaster, R. M. Joyce.

Friday, February 8.

Sessions will open promptly on time.

9:15 a. m.—"Store Arrangement and Display," C. J. Lehmkuhl, Wahoo, Nebraska.

"Concentrated Buying," J. S. Rhein, Alliance, Nebraska.

Discussion.

C. M. Whitman "Buys" by AMERICAN ARTISAN

I base my buying on the information in the Sheet Metal Department of AMERICAN ARTISAN.

I have figured out a system whereby I can keep posted on the buying price merely by taking the information in AMERICAN ARTISAN and adding freight to those prices.

Yours truly,

C. M. Whitman

Henryetta, Oklahoma,
December 28, 1923.

"Business Records," Paul Jones, Benkelman, Nebraska.

"Trade Problems," George O'Malley, Greeley, Nebraska.

10:50 a. m.—"Decimal Pricing and Packing," C. C. Johnson, Omaha, Nebraska.

11:15 a. m.—Unfinished business, reports of committees, place of next meeting, etc.

Election of officers.

Immediately after lunch the new boards of both the Insurance Company and Hardware Association will meet to complete work.

Pitts Brothers Hardware Open New Store in Richmond, Indiana.

C. C. Pitts and his brother, V. H. Pitts, have opened a new hardware and stove store in Richmond, Indiana.

Among other well known lines, they will have exclusive sale of Copper Clad Malleable ranges, Irving Ellis having sold the opening stock.

Building operations in the principal cities during October totaled \$270,000,000, compared with \$221,000,000 (revised figure) for the same cities during September and \$205,000,000 for the same cities in October, 1922, the increase over a year ago being 32 per cent, and the total outlay represented by these figures having been exceeded only twice in building history.

Sam Hill, Sr., Capitulates to His Son and Paints the Front of His Store.

He Also Signs Articles of Agreement to Discontinue Practice of Acting as Customers' Banker.

OLD Samuel Hill was one of those shrewd, calculating codgers who sat around the stove in his hardware store and listened to the opinions offered by the male town-folk.

The difference between Sam and his friends was that he had little to say, being satisfied to listen. His mind was not idle while listening; far from it. He had learned early as he thought, that life is a gamble and he who keeps his thoughts well covered until thoroughly matured, has the advantage on the other fellow. By thus closely observing human nature Sam had gathered sufficient information to make a good living out of his hardware store. By squeezing each nickel that came into their hands Sam and his wife had been able to educate their two children, the oldest, Sam, Jr.

However, the old man felt himself being superceded by the only other hardware store in town whose ads were constantly running in the papers. Then, too, there was the banker's hesitation in granting him that last loan staring him in the face and it troubled him.

Upon arriving home after the graduation exercises at the university the young man had gone blithely to work as a clerk in his father's store, nor did he hesitate to rustle the broom each morning, much to the astonishment of the other clerks, to say nothing of that of the townspeople.

Things ran on in this manner for about two weeks. Then suddenly something happened. Sam, Jr., appeared in the office just as Sam, Sr., had completed the perusal of the weekly Chronicle. In Sam's hand was seen a rather lengthy document in the form of a report.

"Well, son, what can I do for you?" began Sam, Sr.

"Just this, dad," replied the young man. "You expect me to become

a partner of this firm as I understand it."

"Yes, well," said his dad.

"Well, just this," said his son. "I'm perfectly willing to become a partner in your firm and do everything in my power to build up this business on one condition, and that condition is: that you discard all of these old methods of selling stock, carrying customers on the books from one year's end to the other,

Milton L. Kistlers Has Read It for 15 Years

I have taken **AMERICAN ARTISAN AND HARDWARE RECORD** for 15 years, and sure look forward to its coming every week.

It is chock full of good articles and the editorials are especially good.

Very truly yours,
Milton L. Kistlers.

834 Brookfield Avenue,
Brookfield, Missouri,
December 20, 1923.

install an up-to-date bookkeeping system, take that trash out of the display window and rebuild the window so that a display of some decency can be made and arrange for a regular advertising campaign to be worked out scientifically."

He sat staring at his son for fully five minutes before he recovered sufficiently to say: "But, son, do you realize what that will cost?"

"Yes," said Sam, Jr., "\$1,500 at the inside."

"One thousand five hundred!!" shouted Sam, Sr., as he bounded from his chair, shaking his fist under the nose of his son. "Where on earth do you think I will get \$1,500 to carry out those fancy ideas that you have gathered going to college? I always told your mother that this higher learnin' was all the bunk, but she couldn't have nothin' but that you and your sister

must go to college. Well, I hope she's satisfied."

"I am not asking you to put up the money, am I?" said his son. "I've got \$1,000 of that I earned while in school and which I, as a junior partner, propose to put into this business."

"But just sit right down and calm yourself. You've got to hear me through whether you accept my offer or not," said his son.

"When I went back to college last Christmas, I stopped off in Chicago, Detroit, Philadelphia, New York and Boston, where I made a few observations on my own account about store management. I even went so far as to call on a number of hardware manufacturers to get their point of view regarding the retail dealer and his methods and I found out that the retailer can make the manufacturer dance somewhat to his tune if his demands are reasonable. I also reasoned that there is no earthly reason why you or any other dealer should act as banker for Bill Simpson or Tom Perkins. You are not running a bank. Let Banker Schmidt do that. You've lost enough money in that manner to pay for all the improvements to make this store an up-to-date place of business.

"Then, too you've got to agree to paint up the exterior of the store and put up a sign worthy to be put and arrange to have those windows washed every morning before I sign any articles of agreement to be your partner.

"Just one thing more, I'll give you two days to think about these things, dad, and if you decide that these are too much for you, why it's your privilege to refuse me, but I'm warning you that if you turn me down, I'm taking my little savings across the street where I'll rent that vacant store on the corner, and I'm going to run you right out of business.

"Well, good-day, dad, Sis and I have been invited to take dinner with Dorothy Perkins, Sis and 'Dot' were room mates at Wellesley, you know, and, er—don't disappoint me, dad," said Sam, as he closed the door of his father's office.

"A chip off the old block," said Sam, Sr., to himself. "Well, Perkins and I get along very well together."

Needless to say that Sam Hill, Sr., capitulated, and that the Sam Hill & Son Hardware Company, —, Iowa, is prospering.

ways lead to the work shop and rear entrances.

As every one knows, it is always desirable to put rapidly selling goods at the fore part of the store. Men's shaving goods and radio sets would be the type of goods found at the very front. However, it is best to keep the goods rotating from one show case to the other, never allowing them to remain in one case more than a week or two at a time.

Arrangement of Show Cases Ranks in Importance with Display Windows.

Men's Goods and Radio Sets Should Occupy Prominent Position in Front of Store.

NEXT to the proper design of the store window display comes the scientific arrangement of the store interior itself. The show cases must be distributed about the center of the store in such a way as to give ready access to the goods displayed therein. In making these arrangements, due respect must be had for the power of suggestion. A woman, for instance, coming into the store would be influenced to buy articles which came within her range of vision while she is waiting to be served.

In order to gain the best possible arrangement for his store, a "subscriber" has mailed in a plan of his present arrangement and desires suggestions and opinions from other readers of AMERICAN ARTISAN AND HARDWARE RECORD on the best possible arrangement of this store.

This subscriber also wishes to know what articles should be displayed in the show case nearest the entrance. What goods should the others have?

Along the two sides of the store are placed vertical wall cases that are equipped with glass doors. These cases are seven feet high and the glass doors extend down to within three feet of the floor, with a ledge at the base.

The tops of these wall display cases are decorated with palms, and the walls above them are covered with a light colored paint. The ceiling is equipped with ornamental sheet metal and painted light colored, so as to reflect the light back to the show cases.

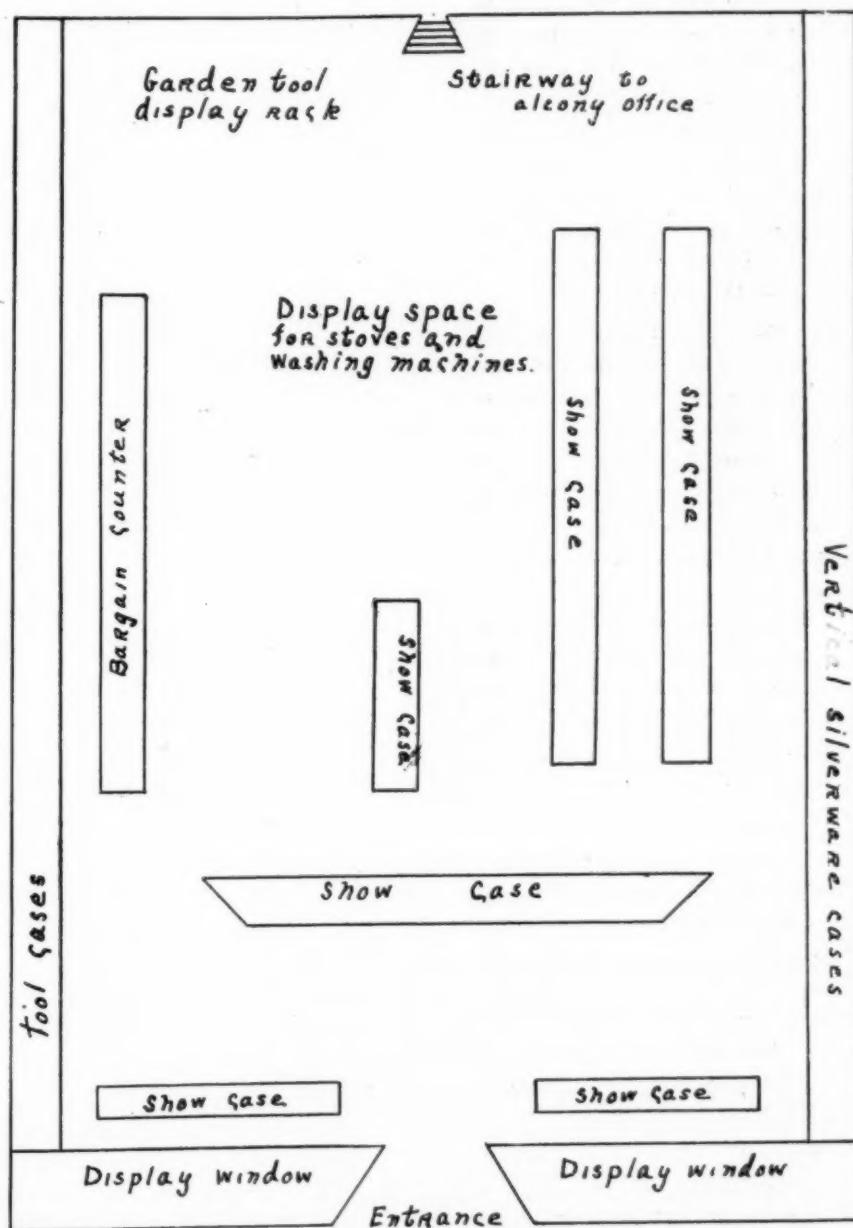
The lighting fixtures are of the enclosed type, hanging two and one-half feet from the ceiling.

At the back of the store a balcony

has been arranged, up perhaps nine or ten steps above the main floor. This balcony has been equipped for an office, and from here the proprietor can see every part of the store without leaving his desk.

In the rear end of the store door-

When you take a boy or girl into your employ, on the beginning of that employee's business career, you assume some responsibility for getting him or her started right. Don't shirk that responsibility.



Arrangement of Hardware Store Interior.

It Does Not Pay to Lie in Your Advertising.

Max Katz, Treasurer of the Merchants Tire Company, Boston, Massachusetts, was tried and convicted on four counts for fraudulent advertising in the Suffolk Superior Criminal Court, Boston, on November 7, 1923. The conviction followed a grand jury indictment.

On two different occasions Katz inserted advertisements in Boston newspapers, offering Ajax and Fisk factory seconds under the representation "Stamped 'Seconds,' but Perfect in Every Respect." Proof was introduced by the commonwealth to show that tires sold in response to such advertising were imperfect and not of the quality advertised.

Last summer, immediately following the first use of this type of copy by the Merchants Tire Company, Katz was warned by the Boston Better Business Commission that his advertising was untruthful and in violation of the law, but heedless of such admonitions he continued his fraudulent advertising. Katz's conviction was the result.

The National Vigilance Committee of the Associated Advertising Clubs of the World has long advocated that for a manufacturer, jobber or dealer so to advertise factory seconds or imperfect tires as to lead purchasers to believe that they are of first quality or perfect, is improper, misleading and unlawful. Katz ignored the timely warning.

This is the sort of action that will encourage hardware merchants to handle good automobile accessories. The action was "Perfect in Every Respect."

Vicious "price cutters" have kept many good merchants from handling accessories.

Coming Conventions

Nebraska Retail Hardware Association, Lincoln, Nebraska, February 5 to 8, 1924. George H. Dietz, Lincoln, Secretary-Treasurer.

Wisconsin Retail Hardware Association Convention and Exhibition, Milwaukee Auditorium, February 6, 7, 8, 1924. George W. Kornely, Manager of Exhibits, 1476 Green Bay Avenue, Milwaukee.

kee. P. J. Jacobs, Secretary-Treasurer, Stevens Point.

Michigan Retail Hardware Convention and Exhibition, Grand Rapids, February 12, 13, 14, 1924. Karl S. Judson, Exhibit Manager, 248 Morris Avenue, Grand Rapids. A. J. Scott, Secretary, Marine City.

Iowa Retail Hardware Association, Des Moines, Iowa, February 12, 13, 14 and 15, 1924. A. R. Sale, Secretary-Treasurer, Mason City.

The Pennsylvania and Atlantic Seaboard Hardware Association, Incorporated, Convention and Exhibition at the Philadelphia Commercial Museum, Philadelphia, Pennsylvania, February 12, 13, 14 and 15, 1924. Sharon E. Jones, Secretary-Treasurer, Wesley Building, Philadelphia.

Illinois Retail Hardware Association, Hotel Sherman, Chicago, Illinois, February 19, 20 and 21, 1924. Leon D. Nish, Secretary-Treasurer, Elgin.

Ohio Hardware Association, Convention and Exhibition, Cincinnati, Ohio, February 19, 20, 21 and 22, 1924. James B. Carson, Secretary, 1001 Schwind Building, Dayton.

New York Retail Hardware Association Convention and Exhibition, February 19, 20, 21, 22, 1924. Headquarters, McAlpin Hotel, and exhibition at Seventy-first Regiment Armory, New York City. John B. Foley, Secretary, 412-413 City Bank Building, Syracuse.

New England Hardware Dealers' Association Convention and Exhibition, Mechanics' Building, Boston, February 20, 21, 22, 1924. George A. Field, Secretary, 10 High Street, Boston.

North Dakota Retail Hardware Association Convention and Exhibition, Municipal Auditorium, Fargo, February 20, 21, 22, 1924. C. N. Barnes, Secretary, Grand Forks.

Michigan Sheet Metal and Roofing Contractors' Association, February 25 to 28, 1924, Hotel Kerns, Lansing. F. E. Ederle, Secretary, 1121 Franklin Street, S. E., Grand Rapids.

Missouri Retail Hardware Association Convention and Exhibition, Marquette Hotel, St. Louis, February 26, 27 and 28, 1924. F. X. Becherer, Secretary, 5106 North Broadway, St. Louis.

Minnesota Retail Hardware Association Convention and Exposition, St. Paul Auditorium, February 26, 27, 28, 29, 1924. C. H. Casey, Secretary, Jordan.

South Dakota Retail Hardware Association and Exposition, Coliseum Building, Sioux Falls, March 4, 5, 6, 7, 1924. C. H. Casey, Secretary, Jordan, Minnesota.

Iowa Sheet Metal Contractors' Association, March 13 and 14, Wahkonsa Hotel, Fort Dodge. R. E. Pauley, Secretary, Mason City.

Wisconsin Sheet Metal Contractors' Association, March 13 and 14, Republican House, Milwaukee. Ed Hoffmann, Milwaukee.

California Retail Hardware Implementation Association Convention and Exhibition, Civic Auditorium, San Francisco, March 18, 19, 20, 21, 22, 1924. LeRoy Smith, Treasurer, 112 Market Street, San Francisco.

Illinois Sheet Metal Contractors' Association, Jefferson Hotel, Peoria, Illinois, April 9 and 10, 1924. Fred C. Gross, Secretary, 219 South Fifth Street, Quincy, Illinois.

Spring Convention of American Hardware Manufacturers' Association, Roosevelt Hotel, New Orleans, Louisiana, April

8, 9, 10 and 11, 1924. Frederick D. Mitchell, Secretary-Treasurer, 1819 Broadway, New York City.

Annual Convention of Southern Hardware Jobbers' Association, April 8, 9, 10 and 11, 1924, at Roosevelt Hotel, New Orleans, Louisiana. John Donnan, Secretary-Treasurer, Room 821, American National Bank Building, Richmond, Virginia.

Old Guard Southern Hardware Salesmen's Association, April 9. Hotel Roosevelt, New Orleans. R. P. Boyd, Secretary, R. F. D. 4, Nashville, Tennessee.

National Warm Air Heating and Ventilating Association Convention, Hotel Winton, Cleveland, Ohio, April 16 and 17, 1924. Allen W. Williams, 52 West Gay Street, Columbus, Ohio, Secretary.

Southeastern Retail Hardware and Implement Association, composed of Alabama, Florida, Georgia and Tennessee. Convention and Exhibition, Atlanta, Georgia, May 27, 28, 29, 1924. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta.

Hardware Association of the Carolinas Convention, Wrightsville Beach, North Carolina, June 17, 18, 19, 1924. T. W. Dixon, Secretary-Treasurer, 717-718 Commercial Bank Building, Charlotte, North Carolina.

National Retail Hardware Congress, San Francisco, California, June. Herbert P. Sheets, Secretary, Indianapolis, Indiana.

National Association of Sheet Metal Contractors, Washington, D. C., June. E. L. Seabrook, Secretary, Philadelphia.

Retail Hardware Doings

Colorado.

The Eads Hardware Company, Cripple Creek, has purchased the stock of the Reiton Hardware Store.

Illinois.

J. W. Murphy of Dallas City sold his hardware store to the Logan brothers.

Ross Brothers of Newton have sold their stock of hardware to R. L. Worcester of Roodhouse, who has moved his family to Newton and is taking personal charge of the business.

The T. H. McKinney and Son Hardware Store of North Chicago has been purchased by E. M. Hunt of Waukegan and S. A. Zicherman of Zion.

The Wells and Stump hardware stock, Oskaloosa, purchased by Duncan Reed, and located in the Winter Building, will be moved shortly to the Heilman Building, 114 First Avenue East.

Michigan.

The Allegan Hardware Supply Company, Allegan, will move its hardware stock to the DeWright block—known as the post office block.

Tennessee.

Wright-Cruze Hardware Company, Knoxville, has purchased the entire stock of Sterling-Crumbliss Hardware Company.

Texas.

J. H. Nolte, Brownwood, has sold his interest in the Kendall-Nolte Hardware Company to his partner, J. R. Kendall.

Washington.

The Montesano Hardware Company, Montesano, has been sold by C. C. Farber and Albert Fairbairn to W. R. Harriage and Ben Swisher.

The Approach Shortly of Summer's Heat Will Increase Oil Stove Sales.

M. C. Fisher Arranges Attractive Oil Stove Display for David Mahoney Company, Schenectady, New York.

PERFECTION in the science of window display of clothing and shoes has not been accomplished without producing its effect upon the advancement of hardware and stove window arrangement.

Wide-awake store managers have worked out specific lighting systems and backgrounds which will draw attention to the articles placed in the

ovens, double boilers, tea kettles and other boiling kettles.

Attractively arranged in the foreground are electric flat irons.

The display is a typical spring arrangement found in small farming communities. The coming of summer with its intense heat makes people without the gas plate seek relief in the oil stove.



Oil Stove, Seed and Electric Flat Iron Window Display Made by Schenectady, New York, Store to Stimulate Spring Sales.

window. Among these is M. C. Fisher, of the David Mahoney Company, 209-11 State Street, Schenectady, New York.

The accompanying illustration shows to a good advantage the lighting system employed by the store.

The window ceiling is especially designed to reflect the light, while the floor is also covered with a light-colored covering.

The window itself is a corner window and the stoves are so arranged as to be visible to any one approaching the store almost regardless of the direction from which they come.

Oil stoves for both cooking and heating are seen, as well as bake

The seed racks are also well placed to bring customers into the store.

Stove and Furnace Manufacturers Will Be Well Represented at Des Moines Hardware Show.

Among the manufacturers of stoves, ranges and furnaces who will have exhibits at the Annual Convention of the Iowa Retail Hardware Association in Des Moines, February 12th to 15th, inclusive, are the following:

Copper Clad Malleable Range Company, St. Louis.

Cleveland Metal Products Company, Cleveland.

Engman-Matthews Range Company, Goshen, Indiana.

Excelsior Steel Furnace Company, Chicago.

Fox Furnace Company, Elyria, Ohio.

Green Foundry & Furnace Company, Des Moines.

Keith Furnace Company, Des Moines.

Lennox Furnace Company, Marshalltown.

Malleable Steel Range Company, South Bend, Indiana.

Malleable Iron Range Company, Beaver Dam, Wisconsin.

Majestic Manufacturing Company, St. Louis.

Quick Furnace & Supply Company, Des Moines.

Quincy Stove Company, Quincy, Illinois.

Quick Meal Stove Company, St. Louis.

Rock Island Register Company, Rock Island, Illinois.

Thatcher Furnace Company, Chicago, Illinois.

Victor Heating Company, Marshalltown, Iowa.

You may arrange your stock in perfect order, with great neatness, and yet not arrange it in such a way that it will attract customers or develop sales. That is something else again.

Guessing Contest and Mystery Advertising Help to Increase Sales of Gas Ranges.

Indiana Stove Concern Sold So Many as a Result of Campaign That Stock Was Entirely Exhausted.

"MYSTERY" always creates excitement, and when that excitement is being turned into sales, the advertising man is entitled to due credit.

Here is a fine example:

Desiring to start a campaign on Lorain-equipped gas ranges as a leader for their Christmas Sales Drive, the Central Indiana Gas Company, Anderson, Indiana, centered their work on making the pub-

with the heading, "You May Have Tried to Guess the meaning of R. G. R. but R eliable G as R ange Users Never Guess—while Using the Lorain-equipped Oven—Reliable Gas Ranges for a Happy and Practical Christmas." Included was a list of many owners of Lorain-equipped Reliable gas ranges in the city of Anderson.

In connection the agent made an offer of \$5.00 discount allowed until

R. G. R.

WILL MAKE YOUR HOUSE WORK MUCH EASIER!

SURELY You Must Order One Soon—Many of Your Neighbors Enjoy Their R. G. R. Daily.

One of the Mystery Advertisements That Helped Sell Reliable Gas Ranges.

lic do some guessing on blind advertising.

They started in very modestly with the mysterious letters "R. G. R." in large type across two columns, 2 inches deep—with no other reading matter. For three days they ran these ads in newspapers.

The next ad (of a size 3-columns by 2 inches—see illustration herewith) "R. G. R. will make Your House Work Much Easier. Surely you Must Order One soon. Many of your Neighbors Enjoy their R. G. R. Daily." And again a "blind" ad without signature. The next ad read "Good for \$5.00 to all who Guess what 'R. G. R.' is by the 17th will be allowed a \$5.00 discount on any R. G. R. in our store. Your guess must be in our store by 5:00 p. m. the 17th."

Then on the 19th the curtain was lifted for the benefit of the people that had been mystified by the letters "R. G. R." For on that day the Central Indiana Gas Company ran a full page ad in the local newspaper

Christmas where the old cooking appliance was taken in. This ad, of course, was signed with the name of the agent prominently displayed.

The best evidence that this clever campaign disposed of Lorain-equipped gas ranges is shown by the fact that the company was soon sold out of ranges and was forced to send a rush order to the factory for more. Just another example of a carefully-planned and intelligently carried through plan of advertising in the newspapers.

William Giles McDowell, Well Known Pennsylvania Stove Manufacturer, Dies in His 66th Year.

J. B. Borden, Vice-President of the Borden Stove Company, 1026 Arch Street, Philadelphia, sent us the sad news of the rather sudden demise of William Giles McDowell, who died January 21st at his residence, 210 West Hortter Street, Germantown, Philadelphia, in his sixty-sixth year.

Mr. McDowell graduated from Central High School, Philadelphia, in February, 1876, with degree of A. M.

He was for many years Treasurer of the Leibrandt & McDowell Stove Company. Later he was Vice-President up to the time of the liquidation of the company in 1904.

He was also for many years Secretary of the Stove Manufacturers' Association of Eastern Pennsylvania, and upon his resignation was given a loving cup in recognition of his long connection with the Association.

The deceased is survived by his widow, son and daughter. He is also survived by a brother, Samuel McDowell, who is connected with the United Stove Repair Company, 117-121 Arch Street, Philadelphia, of which J. B. Borden is Vice-President.

Professor Joseph Becker, Well Known in Stove Field, Passes on.

Announcement is made by the Majestic Manufacturing Company, St. Louis, Missouri, that Professor Joseph Becker passed from this life on Thursday, January 17th.

Professor Becker had many friends in the stove and hardware field who will learn with sorrow of his demise.

H. E. Hoagland Enters Stove and Warm Air Furnace Business in Columbus, Ohio.

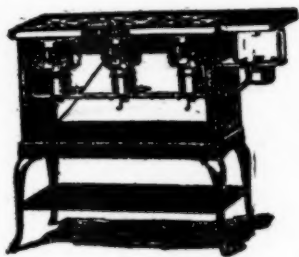
H. E. Hoagland, formerly Sales-manager of the furnace department of Moore Brothers Company, Joliet, Illinois, has resigned, to enter business for himself at 1452 Bryden Road, Columbus, Ohio.

He will act as manufacturers' agent for Monarch and Paramount Malleable Coal, Gas and Electric Ranges, Allen's Parlor Furnaces and the Victor Steel Furnaces.

Mr. Hoagland has been a subscriber for AMERICAN ARTISAN for many years and asks to have it sent to his new address, as he knows that it contains valuable information about his lines in every issue.

Here's a Man Who Believes in Advertising Results.

What do you mean by "Cool Cook"? That is exactly what the designer of this ad, reprinted from the Bay City, Michigan, *Tribune*, wanted the reader to think. From this he goes on down to the explanation and finds out how it is possi-



COOL COOKING

Yes it is possible with our new oil stoves, two and three-burner, from

\$13.50 to \$65.00

Puritan, Perfection, New Perfection with super-fix burners, New Process with large burners and Nesco Asbestos Wick Stoves.

K. E. NIEDZIELSKI

22nd and Michigan Ave.
Phone Madison 2843-R

A Piece of Good Stove Sales Advertising.

ble to have cool cooking. This is indeed a very clever ad. Perhaps it would have been better to have made the ad wider, so that the headline could have been placed at the top; this would have brought the illustration down toward the side, a practice more in vogue now among the better ad writers.

*Carlson Hardware Company,
Fairfield, Iowa, Moves
Stoves with Free Offers.*

There are indeed many ways of attractively offering unusual discounts in order to move leftover stock rapidly at the end of the season.

Most retailers simply advertise a

special sale, but due to the increasingly common usage of this method, a few men have gone over to the practice of making a free offering of some specific article with each purchase made.

This practice has much to commend it and one form of it is well illustrated in the accompanying advertisement taken from the *Fairfield, Iowa, Ledger-Journal*.

Here the free offer is the 26-piece set of Community Silverware to be given away with each purchase of a Monarch Malleable Range.

Care must be exercised when making these free offers to see that the silverware or china is of a good quality; otherwise the customer will come to believe himself "sold" on the proposition and will be more skeptical in the future of taking advantage of these free offers.

This type of ad is designed to produce immediate action and is, in fact, very good for its purpose—that of moving out leftover stock or goods out of season.

The ad has an additional good feature in that the factory representative is mentioned, which always adds weight, as people believe a factory representative can demonstrate and explain the stove better than the salesman or clerk.

Little Pointers Observance of Which Will Insure Long Life.

Never dispute the right of way with a railroad train.

Don't drink bootleg whisky before or after meals.

Pay attention when you hear "fore."

Never pull a live wire.

Don't mistake a gas accelerator for the brake.

Cut down on cigars when filling up your gas tank.

Don't stop to count ten when somebody says "stick 'em up."

Don't run after or in front of a street car.

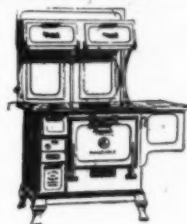
Avoid reading newspapers while walking across downtown streets.

Keep your eye on the seismograph.

Never hunt a gas leak with a lighted match on Friday.

Don't assume that the other driver is going to observe the rules of the road.

FREE!!



Tomorrow will be your last opportunity to obtain a 26 piece set of Community Silverware Free with the Purchase of a **MONARCH MALLEABLE RANGE**

Let The Factory Representative Explain to you the Advantages of---

Malleable Construction

Vitrafused Flue Linings

Duplex Drafts

Mirco Finished Tops

CARLSON

HARDWARE CO.
EAST SIDE OF SQUARE

Discard Superlatives—Make Advertisements Descriptive, Informative and with Personality.

Money Spent for Newspaper Space Which States in Sing-Song Fashion the Names of Items Is Wasted.

SUPERLATIVES have become taboo in the more exclusive advertising circles, but perhaps where they are not used to excess they can be worked into the advertising without committing a gross iniquity.

For a well balanced and highly specialized ad, the accompanying reprint from the Wheeling, West Virginia, *News* is an excellent example.

The special sale of one or two items to attract customers to the store is very good. What person who would be a potential customer for Radiantfire stoves would not also be in need of a wrench of the kind offered in the ad?

Perhaps the words "The Most Beautiful Stove in America" are a part of a slogan, and in that case

they are very appropriately placed; otherwise some other words should be used in their stead. Who is to judge whether or not it is the most beautiful stove in America? Certainly the customer, and perhaps he does not think it is the most beautiful stove.

* * *

Every man prides himself on being an embryo carpenter or repairman about the house, and without exaggeration many men who follow carpentry as an avocation can really accomplish a great deal in the way of furniture and odds and ends construction.

Here, then, is a fairly remunerative field well worth cultivation by the hardware dealer.

Many hardware dealers have not

been oblivious to this fact and have worked up considerable business along this line.

The accompanying reprint, taken



Are You a Handy Man?

How many more little things you can fix or make around the home if you have the tools with which to do them!

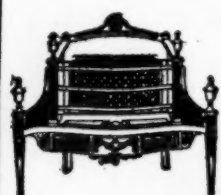
The hardware we carry is the same as that which expert carpenters use. Our stock is fully equipped with the best brands of hardware.

See our line of Eternal and Chambers Ranges before buying.

Hawks-Kauffman Hardware Co.

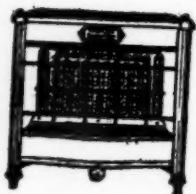
E. Lincoln Ave.

Phone 3.

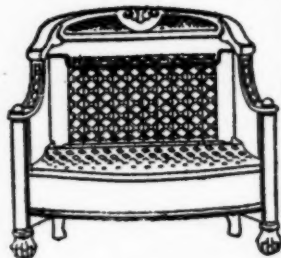


The HUMPHREY Radiantfire

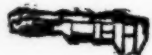
The Most Beautiful Stove in America
A Style and Size for the Home, Office and Store



This marvelous gas fire gives you healthful heat, complete comfort, convenience. A real saving in money in spring and fall and a cheery fire throughout the winter.



The Originals
Priced from \$15.00 Up



Special This Week

10-inch Knife Handle Warranted Steel Monkey Wrench. Only..... **98c**



GRISWOLD
WAFFLE IRONS

Square, round and heart shaped.

All Cast Iron.
\$1.90 to \$2.35

Coal Heaters and Cook Stoves—Combination Coal and Gas Stoves

KALBITZER'S

The Old Reliable Stove and Hardware House
1050-52 MARKET STREET
Closing Hours: Week Days, 5:30. Saturdays 6 P. M.

from the Goshen, Indiana, *Times*, is a good example of how the hardware man can appeal to the ordinary man.

The illustration and headline are very good and well designed to attract the eye, not only of the experienced carpenter, but that of the man who enjoys puttering about his home during some of his leisure moments.

This field should be more aggressively cultivated, as it will be found highly remunerative.

Unlooked for Price Strengthening Is Bringing Some Buyers —Spring Building Outlook Good.

*Trading in Non-Ferrous Metals Generally Active
—Tin Restive—Lead Strong—Copper and Zinc Up.*

ON THE whole January has shown that buyers' caution still obtains, but with less obstinacy in many lines. Completion of inventory-taking, and unexpected price strength is prodding some buyers into market.

Moreover, business sentiment is beginning to reflect the first tingle of enthusiasm of normal spring trade expansion. In its main outlines, the January picture has been constructive.

Abroad, also, the month has blossomed new hope. An international committee of experts, headed by an American, is grappling with the baffling problem of reparations.

England has swallowed the dreaded dose of a labor government with great equanimity. British unemployment is smaller. For all Europe, January events give promise that the beginning of some solution of the gigantic problems confronting her may be found in 1924.

The outlook for spring building is good. Railroads have bought in fair quantities during January, though car loadings have fallen below one year ago.

Copper.

Buying of copper by domestic consumers is without improvement. Few orders also are coming from abroad.

Electrolytic is still available at 12.75 cents delivered from domestic producers for February-March shipment. There is a possibility that April might be bought at this price also, but producers generally are asking 12.87½ cents delivered for second quarter shipment.

The little interest taken in the market is still in March-April position.

It is estimated that sales on domestic account this month to date have aggregated 50,000,000 pounds.

The undertone of the market is slightly easier rather than otherwise, but there is not trading enough to indicate the exact position of either buyers or sellers.

There was no change in Chicago copper prices.

Tin.

The London market holds very steady considering that it has had no support from America for nearly a week. Since January 23 the prices in New York have been below the London equivalents and on many days they were also below Singapore. So it is unlikely that buying orders have been sent to either quarter from this market. The price is nominal at 48.50 cents.

Chicago prices are: Pig Tin, \$53.00; Bar Tin, \$55.00¼.

Lead.

Lead maintains its previous strength, held in check by the cautious policy of leading producing factors. Some interference was reported with Mexican ore shipments, but not sufficient to cause marked anxiety.

Prices are 8.12½ cents St. Louis, 8.25 cents New York, prompt February; March, 8 cents in both cities.

Chicago quotations are: American Pig, 9.25 cents; Bar, 10.50 cents.

Zinc.

Prime Western for prompt and February have been very generally quoted for some days at 6.50 cents, East St. Louis, and late yesterday some prompt was offered at 6.47½ cents without finding acceptance, the best bids, those from operators, being 6.45 cents, which were declined. Today 6.45 cents is again bid for either prompt or futures, and so far as learned this is still impracticable even for prompt, most sellers being encouraged by the better prospects for export to stand fast at 6.50 cents.

Solder.

Chicago warehouse prices on solder are as follows: Warranted, 50-50, \$30.75; Commercial, 45-55, \$31.00, and Plumbers', \$29.75, all per 100 pounds.

Bolts and Nuts.

Although bolt and nut prices still are based on 60 and 10 off for large machine bolts, most selling interests here are quoting 60 and 5 off on small or undesirable business. It seems probable that 60 and 5 off will shortly become the general base. Specifications from implement and automobile manufacturers continue good. Most makers have comfortable order books.

Wire and Nails.

Mixed carloads of wire products are being ordered by jobbers, practically all of whom are taking their minimum quota of 1,000 rods of fencing when orders of this kind are placed.

Straight carloads of nails are noted from time to time, but most orders call for nails, barbed wire and fencing.

Operations average 75 per cent of capacity, with some mills at a higher rate. Plain wire is quoted at 2.75 cents, with wire nails holding steadily at 3.00 cents, base Pittsburgh.

Tin Plate.

There is no longer any complaint among the tin plate mills as to specifications. For a time there were mills that had sufficient engagements by way of sales and contracts, but did not have specifications sufficient. Lately the specifications have been coming in very well, and mills in general can now make up rolling schedules farther ahead than is really necessary. Specifications for March were due a fortnight ago and while some have come in a little after the date, they are practically

all in now, while in many instances April specifications have been filed, with permission to mills to ship ahead of time if they wish.

If, as is commonly estimated, the majority of mills have more business for second quarter than for first quarter, there is likely to be a scarcity of tin plate, for the industry is already running practically full and cannot do much better in the second quarter, say more than 10 per cent better. It may be, however, that the anticipations of delivery recently given by buyers make it that the mills are substantially as fully obligated for this quarter as for next quarter.

Sheets.

Production of sheets is now nearer 80 per cent than 75 per cent of theoretical full. As theoretical full is impossible and unnatural, on account of breakages and other physical disabilities, and as it is normal in any business for a producer here and there not to be fully supplied with orders, it may be said that production of sheet is now very close to what should be considered a full normal tonnage, say within 10 per cent. Furthermore, there are prospects of increases in operation at some plants in the next two or three weeks.

Very little price shading, much less price cutting, is now observed in the market. The regular thing is for blue annealed, common black, galvanized and automobile sheets to go at full prices. Here and there a slight concession may be made by a few mills, but even these do not seem to be making the concessions generally. There is certainly much less irregularity than a fortnight ago, when the average of transactions was distinctly higher than in December.

The market is steady at 3.00 cents for blue annealed, 3.85 cents for black, 5.00 cents for galvanized and 5.35 cents for automobile sheets.

The buying of sheets by the automobile manufacturers promises to increase, since if they attain 75 per cent of the business they contemplate for 1924, the full-finished sheet

mills of the country will be able to supply their demands only with great difficulty.

One automotive interest which did contract for its first quarter requirements already has specified all but about 8 per cent, consequently additional orders will doubtless have to be placed for its February and March needs.

Full-finished automobile sheets are quoted firmly at 5.35 cents base Pittsburgh, although in connection with blue annealed, black and galvanized concessions appear now and then but so far as can be learned these do not exceed \$2 per ton below the going market levels on these three grades, of 3.00 cents, 3.85 cents and 5.00 cents, base Pittsburgh, respectively. The lower fig-

ures of 2.90 cents, 3.75 cents and 4.90 cents, base Pittsburgh, respectively, are offered by those companies which did not participate largely in the buying movement of last December.

Old Metals.

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$18.50 to \$19.00; old iron axles, \$26.50 to \$27.00; steel springs, \$20.00 to \$20.50; No. 1 wrought iron, \$15.50 to \$16.00; No. 1 cast, \$19.00 to \$19.50, all per net tons. Prices for non-ferrous metals are quoted as follows, per pounds: Light copper, 9 cents; light brass, 6 cents; lead, 6 cents; zinc, 4 cents, and cast aluminum, 17¼ cents.

Pig Iron Prices Advancing in All Markets; Interest in Buying Renewed.

Northern Pig Iron Strong at \$24—Another Selling Impetus at Birmingham—Activity Slightly Increased at Pittsburgh.

"THE steel corporation's earnings reflect the higher price level reached late last year, as well as success in counteracting higher costs of the eight hour day," the *Iron Age* says. "Appropriation of \$400,000,000 for plant improvements in 1923 calls attention to the fact that since its organization the corporation has paid in dividends \$1,155,000,000 and has appropriated for new construction \$1,125,000,000, or practically dollar for dollar.

"The volume of new inquiries is large, but the amount of actual business done is slightly below the preceding week," the *Iron Trade* states. "Thus far this month orders taken by the steel corporation and at least one of the largest independents exceeded shipments. Actual bookings of freight car orders appear to have been much heavier than generally known. Structural steel awards declined sharply."

Firmer prices dominate the pig iron market, although indications of advances are not uniformly pronounced in all markets. No. 2 found-

dry iron is strong at \$24 in the Chicago district, where an advance of 50 cents is predicted.

While basic iron is quoted at from \$22 to \$23, valley, one producer has announced \$22.50, valley, as the minimum after February 1. More interest is being manifested in second quarter requirements. A reduction in the price of English ferromanganese to \$109, duty paid tidewater, has been met by domestic producers. While this quotation still is nominal, it is believed lower prices could be obtained.

A composite of fourteen leading iron and steel products reflects a slight stiffening of prices. The week's figure is \$43.39 as compared with \$43.35 last week and \$43.02 four weeks ago.

Statistics for December, making annual comparisons possible, show that in 1923 exports and imports of iron and steel from and to the United States were slightly in excess of those in 1922. Imports of pig iron totaled 367,820 tons last year as against 383,444 tons in 1922.

Everything Used in Sheet Metal Work



A brand almost as old as the tin-plate industry in this country—it identifies a product that has stood the test of time.

Supplied in IC and IX thickness; 112 Sheets per case; 20x28; the IC gauge will weigh about 246 lbs. net.

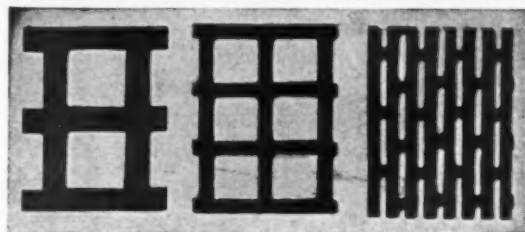
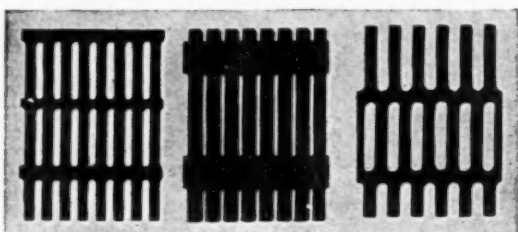
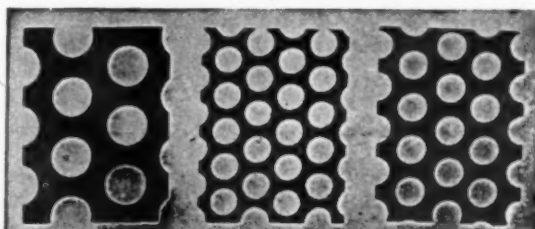
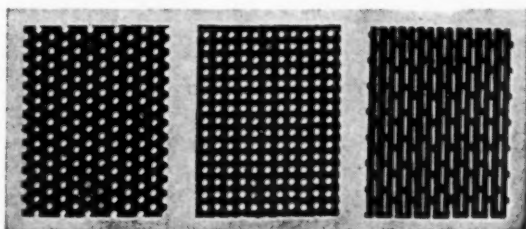
Since 1872

We offer the trade a thoroughly dependable service based on over 50 years of experience in supplying the needs of Sheet Metal Workers and Furnacemen. Our constant growth—an ever-increasing list of satisfied customers—testify to the quality of Osborn Products.

Catalog No. 24, ready for distribution very soon, will be sent at your request.

The J. M. & L. A. Osborn Co.
CLEVELAND OHIO

PERFORATED METALS



PERFORATED STEEL — COPPER — BRASS — BRONZE — ALUMINUM — ZINC — TIN PLATE
and all other metals

For Screening and Sizing STONE—GRAVEL—SAND—COAL—all minerals—GRAIN and ANYTHING TO BE SCREENED

For DRYING FLOORS AND DECKS
VENTILATORS—DRAINS, ETC.

Perforated Tin and
Brass always in stock

GRILLES—REGISTER FACES
and ORNAMENTAL SCREENS

THE HARRINGTON & KING PERFORATING CO.

5649 FILLMORE STREET, CHICAGO, ILLINOIS, U. S. A.

New York Office: 114 Liberty Street

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON.

Chicago Foundry..	24 00 to 24 50
Southern Fdy. No.	2
2	28 01 to 29 01
Lake Sup. Char-	29 04
coal	
Malleable	24 00 to 24 50

FIRST QUALITY BRIGHT TIN PLATES.

	Per Box
IC 14x20 112 sheets	\$12 45
IX 14x20	14 05
IXX 14x20 56 sheets	17 57
IXXX 14x20	18 12
IXXXX 14x20	18 65
IC 20x28 112 sheets	27 50
IX 20x28	29 85
IXX 20x28 56 sheets	16 15
IXXX 20x28	17 20
IXXXX 20x28	18 25

TERNE PLATES.

	Per Box
IC 20x28, 40-lb. 112 sheets	\$25 60
IX 20x28, 40-lb. ..	28 50
IC 20x28, 30-lb. ..	21 80
IX 20x28, 30-lb. ..	24 70
IC 20x28, 25-lb. ..	20 80
IX 20x28, 25-lb. ..	23 70
IC 20x28, 20-lb. ..	18 30
IX 20x28, 20-lb. ..	21 15
IC 20x28, 15-lb. ..	17 05
IX 20x28, 15-lb. ..	15 75
IC 20x28, 8-lb. ..	14 05

COKE PLATES.

Cokes, 80 lbs., base, 20x28.	\$13 85
Cokes, 90 lbs., base, 20x28.	14 10
Cokes, 100 lbs., base, 20x28.	14 45
Cokes, 107 lbs., base, IC	
20x28	14 85
Cokes, 155 lbs., base, IX	
20x28	17 40
Cokes, 155 lbs., base, 56	
sheets	9 75
Cokes, 175 lbs., base, 56	
sheets	10 65
Cokes, 195 lbs., base, 56	
sheets	11 70

BLUE ANNEALED SHEETS.

Base	per 100 lbs. \$3 50
------------	---------------------

ONE PASS COLD ROLLED BLACK.

No. 18-20	per 100 lbs. \$4 50
No. 22-24	per 100 lbs. 4 55
No. 26	per 100 lbs. 4 60
No. 27	per 100 lbs. 4 65
No. 28	per 100 lbs. 4 70
No. 29	per 100 lbs. 4 75

GALVANIZED.

No. 16	per 100 lbs. \$5 10
No. 18-20	per 100 lbs. 5 25
No. 22-24	per 100 lbs. 5 40
No. 26	per 100 lbs. 5 55
No. 27	per 100 lbs. 5 70
No. 28	per 100 lbs. 5 85
No. 30	per 100 lbs. 6 35

BAR SOLDER.

50-50	per 100 lbs. 30 75
Commercial	
45-55	per 100 lbs. 31 00
Plumbers	per 100 lbs. 29 75

ZINC.

In Slabs	7 50
----------------	------

SHEET ZINC.

Cask lots, stock, 100 lbs.	11 00
Less than cask lots, 100 lbs.	11 50

BRASS.

Sheets, Chicago base	19 1/2c
Mill Base	17 1/2c
Tubing, brazed, base	24 1/2c
Wire, base	17 1/2c

COPPER.

Sheets, Chicago base	20 1/2c
Mill base	19 1/2c
Tubing, seamless, base	23c
Wire, No. 9 & 10 B. & S. Ga.	16 1/2c
Wire, No. 11, B. & S. Ga.	16 1/2c

LEAD.

American Pig	\$9 25
Bar	10 50

Sheet.

Full Coils	per 100 lbs. 10 75
Cut Coils	per 100 lbs. 11 75

TIN.

Pig Tin	per 100 lbs. 53 00
Bar Tin	per 100 lbs. 55 1/4

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ADZES.

Coopers'	
Barton's	Net
White's	Net

AMMUNITION.

Shells, Loaded, Peters.	
Loaded with Black Powder 18%	
Loaded with Smokeless Powder	18%

Winchester.

Smokeless Repeater	
Grade	20 & 4%
Smokeless Leader	
Grade	20 & 4%
Black Powder	20 & 4%

U. M. C.

Nitro Club	20 & 4%
Arrow	20 & 4%
New Club	20 & 4%

Gun Wads—per 1000.

Winchester 7-8 gauge 10&7 1/2%	
" 9-10 gauge 10&7 1/2%	
" 11-28 gauge 10&7 1/2%	

ASBESTOS.

Paper up to 1/16	6c per lb.
Rollboard	6 1/2c per lb.
Millboard 3/32 to 1/2	6c per lb.
Corrugated Paper (250 sq. ft. to roll)	\$6.00 per roll

AUGERS.

Boring Machine	40&10%
Carpenter's Nut	50%

Hollow.

Stearns, No. 4, doz.	\$11 50
Post Hole.	
Iwan's Post Hole and Well	35%
Vaughan's, 4 to 9 in.	\$15 60

AXES.

First Quality, Single Bitted (unhandled), 3 to 4 lb., per doz.	\$14 00
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Good Quality, Single Bitted, same weight, per

doz.	13 00
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BARS, CROW.

Steel, 4 ft., 10 lb.	\$ 30
Steel, 5 ft., 18 lb.	1 40
Pinch Bars	
5 1/2 ft., 24 lb.	1 60

BARS, WRECKING.

V. & B. No. 12	\$0 34
V. & B. No. 24	0 43
V. & B. No. 32	0 57
V. & B. No. 30	0 48
V. & B. No. 330	0 63

BITS.

All Vaughan and Bushnell.	
Screw Driver, No. 30, each.	\$ 27
Screw Driver, No. 1, each.	16
Reamer, No. 80, each.	41
Reamer, No. 100, each.	41
Countersink, No. 13, each.	20
Countersink, Nos. 14-15, each	27

BLADES, SAW.

Wood.	
Atkins 30-in.	
Nos.	6 40 26
	\$8 90 \$9 45 \$5 40

BLOCKS.

Wooden	45%
Patent	45%

BLOW TORCHES (See Firepots).

BOARDS.

	Per Doz.
Stove.	
Crystal, 33"	\$28 90
Wash.	
No. 760, Banner Globe (single)	per doz. \$5 25
No. 652, Banner Globe (single)	per doz. 6 75
No. 801, Brass King,	per doz. 8 25
No. 860, Single—Plain Pump	6 25

BOLTS.

Carriage.	
Small, roll thread.	50 & 10%
Small and Large cut thread	50%
Machine.	
Small, roll thread.	60 & 5%
Small, cut thread.	50 & 10 & 5%
Large, cut thread.	50 & 10 & 5%
Stove	70 & 10 & 5%

BRACES, RATCHET.

V. & B. No. 444 8 in.	\$4 54
V. & B. No. 222 8 in.	3 89
V. & B. No. 111 8 in.	3 55
V. & B. No. 11 8 in.	3 02

BRUSHES.

Hot Air Pipe Cleaning.	
Bristle, with handle, each.	\$0 35

Flue Cleaning.

Steel Only, each.	\$1 25
------------------------	--------

BURRS.

Copper Burrs only.	40%
-------------------------	-----

BUTTS.

Steel, antique copper or dull brass finish—case lots—	
3 1/2x3 1/2—per dozen pairs	\$3 12
4x1	4 40

Heavy Bevel steel inside sets,

case lots—	
per dozen sets	7 80

Steel bit keyed front door

sets, each	1 90
------------------	------

Wrought brass bit keyed

front door sets, each.	3 25
-----------------------------	------

Cylinder front door sets,

each	7 50
------------	------

CEMENT, FURNACE.

American Seal, 5 lb. cans, net.	\$ 45
" 50-lb. cans, " ..	90
" 25 lb. cans, " ..	2 00
Asbestos, 5 lb. cans, net.	45
Pecora	per 100 lbs. 7 51

CHAINS.

1/2 in. proof coil chain per	
100 lbs.	\$8 25
American coil chain.	40 & 10%

CHIMNEY TOPS.

Iwan's Complete Rev. & Vent.	30%
Iwan's Iron Mountain only.	35%
Standard	30 to 40%

CHISELS.

Cold.	
V. & B. No. 25, 1/4 in., each	\$0 26
V. & B. No. 25, 1/2 in., each	41
Diamond Point.	
V. & B. No. 55, 1/4 in.	0 31
V. & B. No. 55, 1/2 in.	0 48

Firmer Bevelled.

Round Nose.	
V. & B. No. 65, 1/4 in.	0 29
V. & B. No. 65, 1/2 in.	0 40

Socket Firmer.

Cape.	
V. & B. No. 50, 1/4 in.	0 31
V. & B. No. 50, 1/2 in.	0 57

CHUCKS, DRILL.

Goodell's, for Goodell's Screw Drivers.	List less 35-40%
Yankee, for Yankee Screw Drivers	\$6 00

CLAMPS.

Adjustable.	
No. 100, Door (Stearns) doz.	\$22 00

Carpenters'.

Steel Bar.	List price plus 20%
-----------------	---------------------

Hose.

Sherman's brass, 1/4-inch per doz.	\$0 48
Double, brass, 1/4-inch, per doz.	1 20

CLINKER TONGS.

Front Rank, each.	\$1 75
Per doz.	18 00

CLIPS.

Damper.	
Acme, with tail pieces, per doz.	\$1 25
Non Rivet tail pieces, per doz.	25

COPPERS—Soldering.

Pointed Roofing.	
3 lb. and heavier.	per lb. 40c
2 1/2 lb.	" 45c
2 lb.	" 48c
1 1/2 lb.	" 58c
1 lb.	60c

CORD.

No. 7 Std. per doz. banks.	\$11 00
No. 8 " ..	12 60

CORNICE BRAKES.

Chicago Steel Bending.	
Nos. 1 to 6 B.	10%

COUPLING HOSE.

Brass.	per doz. \$2 20
-------------	-----------------

CUT-OFFS.

Kuehn's Korrekt Kutoffs:	
Galv., plain, round or cor. rd.	
Standard gauge	40%
26 gauge	10%

DAMPERS.

"Yankee" Hot Air.	
7 inch, each 20c, doz.	\$1 75
8 " " 25c, " ..	2 40
9 " " 30c, " ..	2 75
10 " " 32c, " ..	3 00

Smoke Pipe.

7 inch, each.	\$ 25
8 " " ..	40
9 " " ..	50
10 " " ..	60
12 " " ..	90

Reversible Check.

8 inch, each.	\$1 50
9 " " ..	1 70

DIGGERS.

Post Hole.	
Iwan's Split Handle (Eureka)	
4-ft. Handle.	per doz. \$14 00
7-ft. Handle.	per doz. 35 00
Iwan's Hercules pattern, per doz.	14 90

DRILLS.

V. & B. Star, 12-inch Length.	
1/4, 5/16 and 3/8, each.	\$ 25
1/2, each	35
1, each	54
1 1/2, each	81
V. & B. Star, 18-inch Length.	
5/16 and 3/8, each.	\$ 32
1/2, each	45
1, each	69
1 1/2, each	1 05

EAVES TROUGH.

Were your last sheets **SOFT?**

Inland

Open Hearth Galvanized

Inland

Open Hearth Box Annealed

Inland

Open Hearth Blue Annealed

*are soft and workable
and INLAND COPPER
Alloy Quality insures
LONGER LIFE.*

INLAND STEEL COMPANY

38 South Dearborn St., Chicago

Works:

Indiana Harbor, Ind.
Chicago Heights, Ill.

Branch Offices

Milwaukee St. Louis
St. Paul

Steel Ceilings

Side Walls and Cornices

Only first quality material used
Many neat designs of character.

*Write today for our complete cata-
log giving descriptions and prices.*

THE W. J. BURTON CO.

Junction Ave. and Federal St. and
436 Penobscot Bldg. Detroit, Michigan

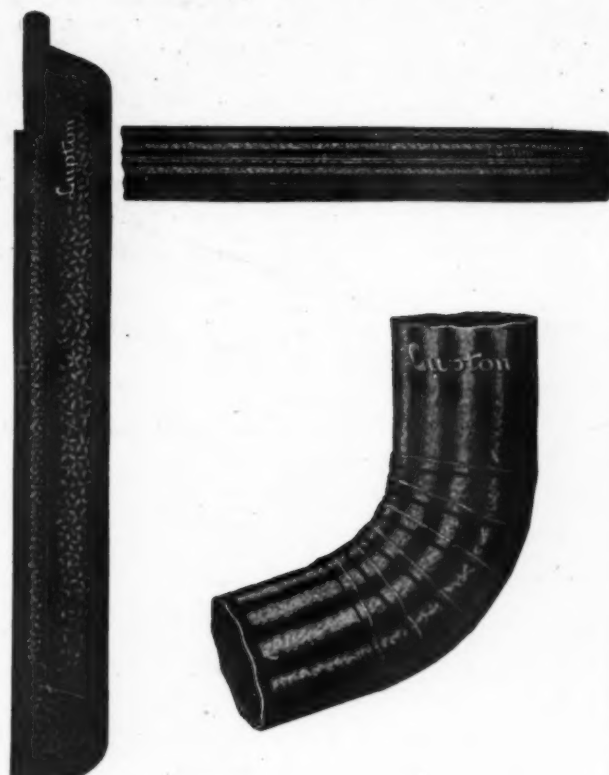
DIPPING shingles separately in molten zinc after they have been cut and formed puts a coating on the edges as well as the sides.

—Further, shingles dipped separately in molten zinc are sure to have the heaviest possible coating for in dipping all the zinc that will adhere to the surface of the tin is allowed to do so.

*Prime roofing tin only is used
in making CORTRIGHT HAND-
DIPPED SHINGLES.*

Cortright Metal Roofing Co.
Philadelphia Chicago

Cortright Metal Shingles



Lupton

Elbows, Conductor Pipe, Eaves Trough, etc.

CUT out the time lost in trying to do a good job with poor materials. Lupton's Elbows are machine made, in one piece; they never vary in size, girth or shape. The Conductor Pipe and Eaves Trough are so made that but minimum labor is needed to erect them properly.

A well-erected job speaks for itself. Get to know the Lupton line—ask for new catalogue and list prices. Made from Armco Iron, Toncan Metal, Horse Head Zinc, copper and galvanized steel.

*Order from your jobber.
Tell us if he doesn't stock it.*

David Lupton's Sons Company

Allegheny Avenue and Tulip Street

Philadelphia

Lupton

INVESTMENT VALUE

Uniform, Collar Adjustable.	
5-inch	Doz. \$2 00
6-inch	2 10
7-inch	2 60

WOOD FACES—50% off list.

FENCE.	
Field Fence	60 1/2%
Lawn	64%

FILES AND RASPS.

Heller's (American)	60-5%
American	65-5%
Arcade	50-10%
Black Diamond	50-5%
Eagle	50-10%
Great Western	50-10%
Kearney & Foot	50-10%
McClellan	50-10%
Nicholson	50-10%
Simonds	60%

FIRE POTS.

Ashton Mfg. Co.	
Complete line	
Firepots and Torches	52%

Otto Bernz Co.	
No. 1 Furn. Gasolene with large shield, 1 gal.	\$ 6 75
No. B Furn. Kerosene, 1 gal.	15 12
No. 10 Brazier, Kerosene or Gasolene, 10 gals.	47 52
No. 5 Torch, Gasolene or Kerosene, 1 pt.	7 92
No. 83 Torch, Gasolene, 1 quart	5 40
No. 86 Torch, Gasolene, 1 pt.	4 05

Clayton & Lambert's.	
East of west boundary line of Province of Manitoba, Canada, No. Dakota, So. Dakota, Nebraska, Kansas, Oklahoma, Amarillo, San Angelo and Laredo, Texas	52%
West of above boundary line	48%

Geo. W. Diener Mfg. Co.	En.
No. 92 Gasolene Torch, 1 qt.	\$ 5 55
No. 0250, Kerosene or Gasolene Torch, 1 qt.	7 50
No. 10 Tinner's Furn. Square tank, 1 gal.	12 60
No. 15 Tinner's Furn. Round tank, 1 gal.	12 00
No. 21 Gas Soldering Furnace	3 60
No. 110 Automatic Gas Soldering Furnace	10 50

Double Blast Mfg. Co.	
Gasolene, Nos. 25 and 35	60%

Quick Meal Stove Co.	
Vesuvius, F.O.B. St. Louis	30%
(Extra Disc. for large quantities)	

Chas. A. Hones, Inc.	
Buzzer No. 1	\$ 9 00
" " 2	12 00
" " 22	13 50
" " 42	15 00
" " 43	19 00

FREEZERS—ICE CREAM.

Peerless and Alaska	
1 quart	\$2 95
2 quart	3 45
3 quart	4 10
White Mountain	
1 quart	\$4 85
2 quart	5 65

GALVANIZED WARE.

Falls (Competition), 8 qt.	\$1 85
10-qt.	2 10
12-qt.	2 30
14-qt.	2 57
Wash tubs, No. 1	\$6 25
No. 2	7 00
No. 3	8 25

GARAGE DOOR HARDWARE.	
Stanley	All net

GAUGES.	
Marking, Mortise, etc.	Nets
Wire	
Disston's	25%

GIMLETS.

Discount	65% and 10%
----------	-------------

GLASS.

Single Strength, A and B.	
all sizes	83 & 85%
Double Strength, A, all sizes	84%

GREASE, AXLE.

Frazers	
1-lb. tins, 36 to case, per case	\$ 4 70
3-lb. tins, 24 to case, per case	7 80
5-lb. tins, 12 to case, per case	7 20
10-lb. tins, per dozen	10 40
15-lb. tins, per dozen	13 80
25-lb. tins, per dozen	19 80

HAMMERS, HANDLED.

All V. and B.	Each, net
Blacksmiths' Hand, No. 0.	
26-oz.	\$1 00
Engineers' No. 1, 26 oz.	1 00
Farrier's, No. 7, 7-oz.	93
Machinists', No. 1, 7-oz.	78

Nail.

Vanadium, No. 41, 20-oz. each	1 59
Vanadium, No. 41 1/2, 16-oz. each	1 59
V. & B., No. 11 1/2, 16-oz. each	1 01
Garden City, No. 11 1/2, 16-oz., each	75

Tinner's Riveting, No. 1, 8-oz., each	79
Shoe, Steel, No. 1, 18-oz., each	65

Tack.

Magnetic	
No. 5, 4-oz., each	81

HAMMERS, HEAVY.

Farrier's, No. 10, 10-oz.	\$1 01
---------------------------	--------

HANDLES.

Axe.	
Hickory, No. 1, per doz.	4 00
Hickory, No. 2, " "	3 00
1st quality, second growth	6 00
Special white, 2nd growth	5 00

Chisel.

Hickory, Tanged; Firmer assorted	per doz. 55c
Hickory, Socket, Firmer, Assorted	per doz. 70c

File	per doz. \$1 20
------	-----------------

Hammer and Hatchet.	
No. 1 per doz.	\$0 90
Second Growth hickory, per doz.	1 50

Soldering.	
Per doz.	\$2 40

HANGERS.

Conductor Pipe.	
Milcor Perfection Wire	25%

Eaves Trough.

Steel hangers	30%
Triple Twist wire	10%
Milcor Eclipse Wire	20%
Milcor Triplex Wire	15%
Milcor Milwaukee Extension	15%
Milcor Steel (galv. after forming) List plus	12 1/2%
Milcor Selflock E. T. Wire, List plus	40%

HASPS.

Hinge, Wrought, with staples.	Net
-------------------------------	-----

HATCHETS.

V. and B. Supersteel.	Each
Broad, No. 1, 24-oz.	\$1 43
Half, No. 1, 15-oz.	1 25
Half, No. 3, 27-oz.	1 37
Claw, No. 1, 19-oz.	1 31
Flooring, No. 1, 20-oz.	1 43
Shingling, No. 1, 17-oz.	1 20
Lathing, No. 1, 14-oz.	1 20
Lathing, No. 2, 17-oz.	1 25

Vanadium Steel.	
Half, No. 62, 22-oz.	\$1 82
Underhill Pattern Lathing, 9 row, 19 oz.	2 29

HINGES.

Heavy Strap, in Bundles.	
4 inch, dozen prs.	\$1 12
5 " " "	1 67
6 " " "	1 93
8 " " "	3 21
Extra Heavy T in Bundles.	
4 inch, dozen prs.	\$1 74
5 " " "	1 85
6 " " "	2 31
8 " " "	3 95

HOES.

Garden	Net
--------	-----

HOOKS.

Box.	
V. and B. No. 9, each	\$0 26

Conductor.	
Milcor	
"Direct Drive" Wrought Iron for wood or brick	15%

Cotton.

V. and B. No. 8, each	24
-----------------------	----

Hay.

V. and B. No. 1, each	26
-----------------------	----

Bar Meat.

V. and B. No. 26, 1/2", each	09
V. and B. No. 28, 1/2", each	16

Screw Meat.

V. and B. No. 2, per gro.	6 50
---------------------------	------

Butchers' "S."

V. and B. No. 6, each	08
V. and B. No. 8, each	11

HOSE.

Per Ft.	
1/2-in. 2 ply molded	9 1/2c to 12 1/2c
1/2-in. cord	8 1/2c to 10c
1/2-in. wrapped	13 1/2c

HUMIDIFIERS.

"Front-Range" Automatic.	
In single lots	50%
In lots of 10 or more	50-5%
In lots of 25 or more	50-10%
Vapor pans, etc., each	50%

IRONS.

Sad.	
Genuine Mrs. Potts, nickel plated, per set	\$1 55
Asbestos No. 70, per set	2 10
Asbestos No. 100, per set	2 30
E. C. Stearns.	
No. OA Corner, doz. sets	\$2 50
No. OB " "	2 75

KNIVES.

Butcher.	
Beechwood Handles, 6-inch blade	25%
Beechwood Handles, 7-inch blade	25%
Beechwood Handles, 3-inch blade	25%
Cooper's Hoop	25%

Drawing.	
Standard	25%
Adjustable	25%
Barton's Carpenters'	25%

Hay.	
Iwan's Solid Socket	25%
Heath's	25%
Iwan's Sickle Edge	25%
Iwan's Imp'd Serrated	25%

Hedge.	
Challenge	25%
Disston's No. 1	25%

Putty.	
Common	25%
Lander's	25%

Scraping.	
Beech Handles	25%
Lander's	25%

KNOBS.

Door.	
Mineral	per doz. \$2 00
Porcelain	" 2 00
Jet	" 2 00

LADDERS.

Step.	
Common, per ft.	23c
Common, with Shelf, add 10c	
IXL	34c
Challenge, 6 to 9 ft.	55c
10 to 16 ft.	60c
Kant-Break, per lineal ft.	75c

LANTERNS.

Per doz.	
Monarch tin, hot blast	\$ 25
Diets No. 2 cold blast	13 00
Best tubular	8 25
Competition lanterns No. 0 tubular	6 90

LAWN MOWERS.

12-inch	\$5 20
16-inch	5 85

Ball Bearing.	
4 blade, adjustable bearing.	
14"	\$5 20
16"	7 80

LEATHER BELTING.

From No. 1 Oak Tanned Butts.	
Extra heavy, 18-oz.	35%
Heavy, 16-oz.	40%
Medium, 14 1/2-oz.	40%
Light, 13-oz.	50%

LEATHER LACING.

Cut, strictly No. 1	45%
---------------------	-----

LEVELS.

Disston, No. 28 Asst.	\$22 05
" No. 18, 20 in., each	1 32
" No. 22, 24 in., each	2 40
" Shafting, 6 in.	19 80
" " 6 in. gr. glass	24 20
" No. 1 Asst.	5 75
" No. 2 Asst.	12 40
" 24-26 in., each	1 02
" 28-30 in., each	1 00

LIFTERS.

Stove Cover.	
Coppered	per gro. \$6 00
Alaska	" 4 75

LOCKS.

Barn Door.	
No. 60 Stearns's	per doz. \$11 00
No. 80	" 20 00

MALLET.

Carpenters'.	
Fibre Head No. 2, per doz.	\$12 00
" No. 3, " "	15 50
" No. 3 1/2, " "	20 50
Round Hickory, per	
" doz.	\$3 00—5 00
Tinner's.	
Hickory	per doz. \$2 25

MATS.

Door.	
National Rigid	5 & 10 & 5%
Acme Steel Flexible	50%

MITRES.

Galvanized steel mitres, and caps, end pieces, outlets	30%
Milcor	
Galv. one piece stamped	40%

MOPS.

Cotton, Star (Cut Ends).	
Pounds 12' 15' 18' 24'-3-oz.	
Per doz. \$4 00 4 35 5 50 7 00	
Enterprise	16%
Parker	50 & 5%

NAILS.

Cut Steel	\$4 70
Cut Iron	4 70
Wire.	
Common	3 80
Cement Coated	3 25

NETTING, POULTRY.

Galvanized before weaving	45-10%
Galvanized after weaving	45%

NIPPERS.

Nail Cutting.	
V. & B. No. 30	73c
Double Duty.	
V. & B. No. 60	76c
Hoof.	
Heller's	40 & 10%
V. & B. No. 52, each	\$2 25

NOZZLES.

Hose.	
Diamond	" 5 75
Magic	per doz. \$9 50

OILERS.

Chase Pattern.	
Brass and Copper	10%
Zinc Plated	40 & 5%

Railroad.

Brass	20 & 5%
Coppered	50 & 5%

Steel.	
Copper Plated	70 & 5%

OPENERS.

Delmonico	per doz. \$1 30
Never Slip	" 60
Crate.	
V. & B. per doz.	\$7 25—11 00

Quality & Beauty IN ART METAL CEILINGS AND SIDE WALLS

QUALITY—only first quality material is used in making FRIEDLEY-VOSHARDT ART METAL CEILINGS AND SIDE WALLS.

BEAUTY—is necessary for the complete and lasting satisfaction of your customers.

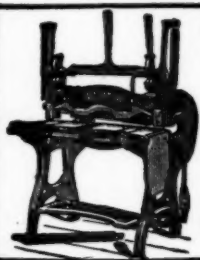
Having one of the finest equipped sheet metal plants in the country and employing only skilled workers enables us to serve you with **QUALITY** goods having the **BEST** DESIGNS.

Write Today for Catalog No. 33

FRIEDLEY-VOSHARDT Co.

OFFICE
733-737 S. Halsted St.

FACTORY
761-771 Mather St.
CHICAGO, ILLINOIS



TREADLE SHEAR

This TREADLE GAP SHEAR is made in all standard sizes for No. 14 and lighter gauge sheets. With it, sheets can be squared, trimmed or slit.

We make a complete line of shears, punches and bending rolls, all sizes for hand or belt drive. Write for Catalog "S."

BERTSCH & COMPANY Cambridge City, Ind.

C. G. HUSSEY & CO.

Rolling Mills and Office, PITTSBURGH, PA.

Manufacturers of
SHEET COPPER, BOTTOMS, ROLL COPPER, TINNED AND
POLISHED COPPER, NAILS, SPIKES, RIVETS, CONDUCTOR
PIPE, EAVES TROUGH, ELBOWS, SHOES, MITRES, ETC.
Branch Warehouses in New York, Chicago and St. Louis
Member, Copper & Brass Research Association

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Efficient, Durable, Economical, The Most in Price and Service ÆOLUS VENTILATORS

Made in all sizes of all metals. We make quick shipments.

ÆOLUS DICKINSON CO.

Vent Makers Since 1888

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CHICAGO, ILLINOIS

Telephone: Lafayette 1862-1863

CONSTANT

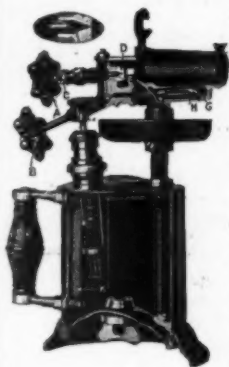
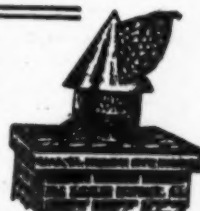


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PULL

"**THE
STANDARD**"
VENTILATOR and CHIMNEY CAP

DOES away with high stacks, swings freely in the slightest breeze and positively cures down-drafts. The strongest and most efficient combination to be had. Has no equal for chimney purposes. All jobbers sell them—write your jobber or us for prices and catalog today.

Manufactured by
STANDARD VENTILATOR CO.
LEWISBURG, PA.



No. 208 Torch
Ask for latest pr. cat.

Double Needle--The Torch With The Cleaner Needle

Modern low grade fuels tend to clog the burner orifice. In trying to keep the gas orifice clear, many burners having sharp pointed needle are quickly ruined as the orifice becomes enlarged. The No. 208 Improved Double Needle Torch has blunt needles which overcomes this and practically all burner troubles. The upper needle has a wire tip that clears the gas orifice, thus securing a perfect fire. Double Needle Torches save time and fuel. Jobbers supply at factory prices. Write for a catalog.

CLAYTON & LAMBERT MFG. CO.
10635 Knodell Ave., DETROIT, MICH., U. S. A.



REQUIRES ONLY HEAT

CHICAGO SOLDER COMPANY
4201 Wrightwood Ave., CHICAGO, ILL.

Sheets

We sell the best grades of all kinds of Sheet Metal.
Write today for complete catalog.

BERGER BROS. CO.

229 to 237 ARCH STREET

WAREROOMS AND FACTORY: 100 to 114 BREAD STREET
PHILADELPHIA, PA.

GALVANIZED STEEL
BLACK STEEL
BLACK and GALVAN-
IZED ARMCO IRON
BLACK and GALVAN-
IZED TONCAN
METAL
TERNE PLATE
BRIGHT TIN
ZINC LEAD
COPPER

PAIS.	
Cream.	
14-qt. with gauge.	per doz. \$9 50
18-qt. without gauge.	per doz. 11 00
20-qt. without gauge.	per doz. 11 75

Sap.	
10-qt. IC Tin.	per doz. \$4 00
12-qt. IC Tin.	per doz. 5 50

Stock.	
Galv. qts. 14 16 18 20	
Per doz. \$9 75 10 75 12 75 14 50	

Water.	
Galvanized qts. 10 12 14	
Per doz. \$5 75 6 50 7 25	

PASTE.	
Asbestos Dry Paste:	
200-lb. barrel	\$15 00
100-lb. barrel	8 00
35-lb. pail	3 25
10-lb. bag	1 00
5-lb. bag	55
2½-lb. cartons	30

PINCERS.	
All V. & B.	
Carpenters', cast steel,	
No. 6 8 10 12	
Each \$0 43 \$0 52 \$0 61 \$0 71	
Blacksmiths', No. 10.	\$0 64

PIPE.	
Conductor	
"Interlock" Galvanized.	
Crated and nested (all gauges)	60-20%
Crated and not nested (all gauges)	60-15%
Square Corrugated A and B and Octagon.	
20 Gauge	60-10%
28 "	60-10%
26 "	60-10%
24 "	60-10%

"Interlock."	
Crated and nested (all gauges)	60-20%
Prices for Galvanized Toncan Metal, Genuine O. H. Iron, Lyonmore Metal and Keystone C. B. on application.	

Stove.	
26 gauge, 5 inch E. C. nested	\$17 00
26 gauge, 6 inch E. C. nested	17 00
26 gauge, 7 inch E. C. nested	19 00
28 gauge, 5 inch E. C. nested	14 00
28 gauge, 6 inch E. C. nested	15 00
28 gauge, 7 inch E. C. nested	17 00
30 gauge, 5 inch E. C. nested	12 00
30 gauge, 6 inch E. C. nested	13 00
30 gauge, 7 inch E. C. nested	15 00
T-Joint Made up, 6-inch	per 100 35 00

Furnace Pipe.	
Double Wall Pipe and Fittings	40-10%
Single Wall Pipe, Round	
Pipe Fittings	40-10%
Galvanized and Black Iron Pipe, Shoes, etc.	40-10%
Milcor Galvanized	40%
PLANES.	
Stanley Iron Bench.	Net

PLIERS.	
(V. & B.)	
Nut, No. 3, each	\$2 50
" No. 5, each	64
" No. 25, each	69
Gas, No. 7, each	55
" No. 3, each	61
" No. 12, each	87

Lining or Crimping.	
No. 35, each	64

Button's Pattern.	
No. 6 each	61
No. 8 each	74

Double Duty, No. 106.	50
-----------------------	----

POINTS, GLAZIERS.	
No. 1, 2 and 3, per doz. pkgs.	65c

POKERS, STOVE.	
Wrt Steel, str't or bent.	per doz. \$0 75
Nickel Plated, coll handles	1 10

POKERS, FURNACE.	
Each	\$0 50

PULLEYS.	
Furnace Tackle	per doz. \$0 60
per gross	6 00
Screw (encased)	per doz. \$0 85

Ventilating Register.	
Per gross	\$9 00
Small, per pair	0 30
Large, per pair	0 50

PUNCHES.	
Machine.	Each
V. & B., No. 11-12, 1½x6.	\$0 19
V. & B., No. 90, ¾x9.	27
V. & B., No. 10, ¾x10.	29
V. & B., No. 1-6, ½x6.	12

Center.	
V. & B., No. 50, ¾x4.	\$0 14

Belt.	
V. & B., No. 101-103.	\$0 24
V. & B., No. 25, ass't.	3 30
V. & B., No. 25, ass't.	3 30

Samson Line.	
No. 1 Hand	Doz. lots or less 40%
No. 2 Hand	3 doz. lots Less 40 & 5%
No. 4 Hand	6 doz. lots or more Less 50%
No. 3 Bench	Less than doz. lots Less 25%
	Doz. lots or more Less 40%

Extra Punches and Dies for Samson:	
No. 1 Hand	Less than doz. lots Less 25%
No. 2 Hand	Doz. lots Less 33½%
No. 4 Hand	3 doz. lots Less 40%
No. 3 Bench	6 doz. lots or more Less 40 & 10%

PUTTY.	
Commercial Putty, 100-lb. kits	\$3 55

QUADRANTS.	
Malleable Iron Damper	10%

FLOOR REGISTERS AND BORDERS.	
Cast Iron	25%
Steel and Semi-Steel	40%
Baseboard	40%
Adjustable Ceiling Ventilators	40%

Register Faces—Cast and Steel	
Japanned, Bronzed and Plated, 4x6 to 14x14.	40%
Large Register Faces—Cast, 14x14 to 38x42.	60%
Large Register Faces—Steel, 14x14 to 38x42.	65%

ROOFING.	
Per Square	
Best grade, slate surf. prep'd	\$1 85
Best talc surfaced.	2 20
Medium talc surfaced.	1 50
Light talc surfaced.	95
Red Rosin Sheetting, per ton	\$72 00

ROPE.	
Cotton.	
Sisal.	
1st Quality, base.	13½c
No. 2	12½c

Manilla.	
1st Quality standard brands	15½c
No. 2	14½c
Hardware Grade, per lb.	12½c

SAWS.	
Butchers'.	
Atkins No. 2, 14-in.	\$12 75
" No. 2, 18-in.	14 30
" No. 7, 16-in.	15 35
" No. 2, 22-in.	15 92
" No. 7, 20-in.	18 05
" No. 7, 24-in.	20 20
" No. 7, 28-in.	22 35

Compass.	
Atkins No. 2, 10-in.	\$ 5 45
" No. 10, 10-in.	5 60
" Blades, No. 2, 10-in.	3 25
" " No. 2, 10-in.	3 30

Cross-Cut.	
Atkins No. 221, 4-ft.	\$3 03
" No. 221, 6-ft.	4 45
" No. 221, 8-ft.	6 07

Hand.	
Copper Burrs only	30%
" No. 96, 20-in.	21 70

Hand and Rip.	
Atkins No. 54, 20-in.	\$19 50
" No. 54, 26-in.	24 40
" No. 53, 16-in.	18 10
" No. 53, 20-in.	22 90
" No. 53, 24-in.	26 60
" No. 53, 28-in.	31 45
" No. 53, 30-in.	34 15

Keyhole.	
Atkins No. 1 complete.	\$3 10
" No. 2 complete.	3 70

Miter Box.	
Atkins No. 1, 4x20.	\$32 65
" No. 1, 5x22.	33 00
" No. 1, 6x22.	42 20

Pruning.	
Atkins No. 20, 12-in.	\$ 8 45
" No. 10, 16-in.	18 15

Wood.	
Atkins No. 202.	\$ 7 19
" No. 318.	8 75
" No. 906.	15 50
" No. 1509.	16 56

SCRAPERS.	
No. 6, six blades each	25c

Hog.	
No. 6, each	25c

Floor (Stearns).	
No. 10, each	\$11 50

SCREEN DOOR HINGES.	
Cast Iron	gross \$13 00
Steel	" 9 50

SCREWS.	
Wood.	
F. H. Bright.	80%
R. H. Blued.	78%
F. H. Jap'd.	74%
F. H. Brass.	76%
R. H. Brass.	74%

Sheet Metal.	
No. 7, ½x ¼, per gross	\$0 55
No. 10, ¾x3/16, per gross	75
No. 14, ¾x ¼, per gross	90

SCREW DRIVERS.	
Uncle Sam Standard Head.	
2 inches, each	\$ 45
5 inches, each	53
8 inches, each	68
12 inches, each	1 02

Uncle Sam Insulated Head.	
3 inches, each	\$ 49
5 inches, each	57
8 inches, each	76
12 inches, each	1 14

Nail.	
V. & B.	
No. 100, in cardboard boxes	doz. \$1 55
No. 100, in wooden boxes	doz. 1 58
No. 30, assorted	doz. 39
No. 5, in cardboard boxes	doz. 1 25
No. 5, in wooden boxes	doz. 1 30

SETS.	
-------	--

Rivet.	
V. & B.	
Farmers'	per doz. \$0 15
Tinners' 3-4	0 40
" 00-0	0 40
Saw.	
Atkins No. 10	per doz. \$3 50
" No. 12	" 6 20

SHEARS.	
Nickel Plated, Straight.	
6"	per doz. \$12 90
7"	14 85
8"	16 80
Japanned, Straight.	
6"	11 00
7"	12 40
8"	13 80

SHEARS, TINNERS' & MACHINISTS.	
Viking	\$22 00

Lennox Throatless.	
No. 18	35%
Shear blades	15%
(f.o.b. Marshalltown, Iowa.)	

Peerless Steel Squaring.	
Foot Power.	
No. 1—30", 18 ga. cap.	15%
No. 2—36", 18 ga. cap.	15%
No. 4—52", 18 ga. cap.	15%
No. 10—120", 22 ga. cap.	15%
No. 4A—52", 16 ga. cap.	15%

Cast Iron Foot Power.	
No. 01, 30", 18 ga. cap.	15%

Power Driven.	
(No. 100 Series, 2 Shaft Drive.)	
No. 142—42", 18 ga. cap.	15%
(No. 200 Series, 2 Shaft Underneath Drive.)	
No. 242—42", 14 ga. cap.	15%
(No. 300 Series, 3 Shaft Underneath Drive.)	
No. 342—42", 10 ga. cap.	15%
No. 372—72", 10 ga. cap.	15%
(No. 500 Series, 3 Shaft Underneath Drive.)	
No. 596—96", 10 ga. cap.	15%
No. 600 Series, 3 Shaft Underneath Drive.)	
No. 6120—120", 3/16" cap.	15%

SHINGLES.	
Per Square	
Zinc (Illinois)	\$18 00

SHOES.	
Milcor.	
Galv. Std. Gauge, Plain or	
corr. round flat crimp.	65%
26 gauge round flat crimp.	40%
24 gauge round flat crimp.	10%
Conductor	65%

SHOVELS AND SPADES.	
Coal.	
Hubbard's.	
No. 1	\$16 00 15 10 14 45 13 70
2	16 35 15 60 14 85 14 10
3	16 75 16 00 15 25 14 40
4	17 10 16 35 15 60 14 85

Post Drains & Ditching.	
Hubbard's.	
Size	
14"	\$17 15 \$16 40 \$15 45
16"	17 50 16 75 16 00
18"	17 85 17 10 16 85
20"	18 20 17 45 16 70
22"	18 55 17 80 17 05

Alaska Steel.	
D-Handle	per doz. \$3 50
Long Handle	3 00

SIFTERS.	
Genuine Hunters, doz.	\$2 50

SKATES.	
Ice, Men's and Boys'.	
Key Clamp—rocker—bright	75
Key Clamp—rocker—nickel	1 10
Key Clamp—rocker—pol.	1 30
Key Clamp—rocker—pol.	4 75
Skate outfit	

Women's and Girls'.	
Key Clamp—rocker	\$1 21
" " hockey	1 35
Ice Skate outfit	5 00

Roller.	
Ball Bearing—Boys'	\$1 45
Ball Bearing—Girls'	1 55

PEXTO SHEET METAL WORKING MACHINES PEXTO



Turning Machine
Columbian Pattern

PEXTO Machines and Tools for Sheet Metal Work, with important advantageous features, offer a distinctive line.

As A. F. Wilcox, South Jacksonville, Fla., puts it: *"They are in a class by themselves."*

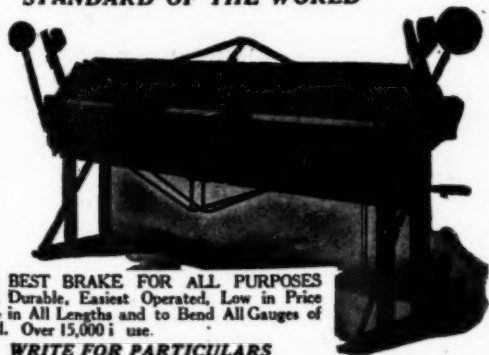
Say PEXTO to your Jobber and greatly profit by the habit.

Write for Catalogue No. 20A showing complete line of Sheet Metal Working Machines and Tools.

THE PECK, STOW & WILCOX CO.

SOUTHINGTON, CONN., U. S. A.

CHICAGO STEEL CORNICE BRAKES STANDARD OF THE WORLD

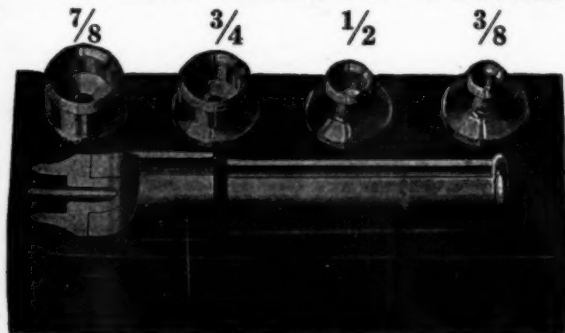


THE BEST BRAKE FOR ALL PURPOSES
Most Durable, Easiest Operated, Low in Price
Made in All Lengths and to Bend All Gauges of
Metal. Over 15,000 in use.

WRITE FOR PARTICULARS

DREIS & KRUMP MFG. CO., 2915 S. Halsted Street, CHICAGO

TINNERS' HOLLOW PUNCH



Write today for descriptive circular giving sizes and prices

WHITNEY METAL TOOL COMPANY 93 Forbes Street
Rockford, Illinois



The ELECTRIC CITY Gutter Former

WE specialize in making good machinery and our gutter formers are the most practical ever produced for

Forming Long Length Gutters

The Electric City Gutter Former is made in all sizes and we carry all sizes in stock. You should have this machine in your shop—it is easily and quickly operated and turns out first class work.

Get our low price on this former

We have been making this gutter former for over 20 years and its simple, strong construction and extremely low price have made it a nation-wide favorite.

Write today, for prices and further particulars on this machine and on our Double Truss Cornice Brake. Your jobber can supply you or we can ship immediately from stock.

FORMING MACHINE CORP.

Successors to
DOUBLE TRUSS CORNICE BRAKE CO.

35 Chandler St., Buffalo, New York

W. B. Topp, Sydney—Agent for Australia and New Zealand

SNIPS, TINNERS'.

Clover Leaf	40 & 10%
National	40 & 10%
Star	50%
Milcor	Net

SQUARES.

Steel and Iron	Net
(Add for bluing, \$3.00 per doz. net.)	
Mitre	"
Try	"
Try and Bevel	"
Try and Mitre	"
Fox's	per doz. \$6 00
Winterbottom's	10%

STAPLES.

Blind.	
Barbed	per lb. 21c@22c
Butter, Tub	" 16@19c
Fence—	
Polished	per 100 lbs. \$5 45
Galvanized	" 6 15
Netting.	
Galvanized	per 100 lbs. \$6 54
Wrought.	
Wrought Staples, Hasps and	
Staples, Hasps, Hooks and	
Staples, and Hooks and	
Staples	50 & 10%
Extra heavy	35%

STONES.

Axe.	
Hindustan	per lb. New Nets
More Grite	" "
Washita	" "

Emery.	
No. 126	per doz. New Nets

Oil Mounted.	
Arkansas Hard	
No. 7	per doz. New Nets
Arkansas Soft	" "
Washita No. 717	" "

Oil—Unmounted.	
Arkansas Hard	per lb. New Nets
Arkansas Soft	" "
Lilly White	" "
Queer Creek	" "
Washita	" "

Scythe.	
Black Diamond	per gro. New Nets
Crescent	" "
Green Mountain	" "
LaMolle	" "
Extra Quinine	" "
bog	" "
Red End	" "

STOPS, BENCH.

No. 10 Morrill pat-	
tern	per doz. \$11 00
No. 11 Stearns pat-	
tern	" 10 00
No. 15 Smith pat-	
tern	" 7 00

STOPPERS, FLUE.

Common	per doz \$1 10
Gem, No. 1	" 1 10
Gem, flat, No. 3	" 1 00

STRETCHERS.

Carpet.	
Bullard's	per doz. \$3 30
Excelsior	" 5 25
Malleable Iron	" 70
Perfection	" 6 30
King	" 4 50

Wire.	
O. S. Elwood, No. 1	per doz. Nets
O. S. Elwood, No. 2	" "

SWIVELS.

Malleable Iron	per lb. \$0 10
Wrought Steel	per gro. \$4 50

TACKS.

Bill Posters' 6-oz., 25-lb.	
boxes, per lb.	15c
Upholsterers' 6-oz., 25 lb.	
boxes, per lb.	15 1/2c

TAPES, MEASURING.

Asses' Skin	List & 40%
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THERMOMETERS.

Tin Case	per doz 80c & \$1 25
Wood Backs	" 2 00 & 12 00
Glass	" 12 00

TIES.

Bale.	
Less than Carload Lots	70%

TRAPS.

Mouse and Rat.	Per Gross
Sure Catch Mouse Traps	\$2 50
Vim Mouse Traps	2 50
Short Stop Mouse Traps	2 40
Wood Choker Mouse	
Traps, 4 hole	11 25

Per Doz.

Sure Catch Rat Traps	\$0 85
Dead Easy Rat Traps	0 90
Packed in One Bushel Band Stave	
Bankets.	

List per Bushel

Sure Catch Mouse Traps	
(360 Traps)	\$6 25
Short Stop Mouse Traps	
(360 Traps)	6 00
Sure Catch Rat Traps (54	
Traps)	3 90
Short Stop Rat Traps (54	
Traps)	3 75

Assorted Mouse and Rat Traps.**List per Bushel.**

Sure Catch (216 Mouse	
Traps and 26 Rat	
Traps)	\$5 65
Short Stop (216 Mouse	
Traps and 26 Rat	
Traps)	5 40

TROWELS.

Cement.	
Atkins No. 6	\$19 50
" No. 9	25 50

TWINE.

White Cotton.	
Eureka, 4-ply	per lb. 30c
Jute.	
Cattle Wire—Galvanized	
catch weight spool, per	
3-ply and 6-ply Bale Lots	22 1/2c

VALLEY.

Milcor	
Galv. formed or roll	60%

VENTILATORS.

Standard	30 to 40%
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VICES.

No. 700 Hand,	
Inches	4 1/2 5 5 1/2
Doz.	\$11 15 13 00 14 85
No. 701. In. 4 5 6	
Doz.	\$11 15 13 00 16 70
No. 1, Genuine Wentworth,	
Noiseless Saw	per doz. 9 25
No. 3, Genuine Wentworth,	
Noiseless Saw	per doz. 12 75
No. 500, All Steel Folding	
Saw	per doz. 16 00

WASHERS.

Over 1/2 in. barrel lots	
per 100 lbs.	\$6 25
Iron and Steel.	
In. 5/16 3/4 1/2 5/8 3/4 7/8	
10 1/4c 9 1/4c 7 1/4c 7 1/2c 7 1/2c	

WEATHER STRIPS.

Metallic Stitched.	
1/2 in., per 100 ft.	\$1 80
3/4 in., per 100 ft.	2 20
Wood and Felt.	
1/2 in., per 100 ft.	\$1 56
3/4 in., per 100 ft.	1 56

WEIGHTS.

Hitching	per lb. Nets
Sash—f. o. b. Chicago	
Smaller lots, per ten	\$47 50

WHEEL BARROWS.

Common Wood Tray	\$3 50
Steel Tray	5 50
Steel leg, garden	6 00

WIRE.

Plain annealed wire, No. 8	
per 100 lbs.	\$3 70
Galvanized barb wire per	
100 lbs.	4 10
Wire cloth—Black painted,	
12-mesh, per 100 sq. ft.	2 35
Cattle Wire—galvanized	
catch weight spool, per	
100 lbs.	4 60
Galvanized Hog Wire, 80 rod	
spool, per spool.	3 98
Galvanized plain wire, No. 9,	
per 100 lbs.	4 15
Stove Pipe, per stone.	1 10

WOOD FACES.**50% off list.**

Coos Steel Handle, 6-in.	40-10%
" " " 8-in.	40-10%
" " " 10-in.	40-10%
" " " 12-in.	40-10%
Coos Knife-Handle, 6-in.	40-10%
" " " 8-in.	40-10%
" " " 10-in.	40-10%
" " " 12-in.	40-10%
Coos All Patterns	40-10%

WRINGERS.

No. 790, Guarantee per doz.	\$55 50
No. 770, Bicycle	52 50
No. 670, Domestic	48 50
No. 110, Brighton	43 50
No. 750, Guarantee	55 50
No. 740, Bicycle	52 50
No. 22, Pioneer	29 00
No. 2, Superb	29 00

ADVERTISERS' INDEX

The dash (—) indicates that the advertisement does not appear in this issue.

A

Aeolus Dickinson Co.	55
American Brass Co.	—
American Furnace Co. Front Cover	—
American Rolling Mill Co.	—
American Steel and Wire Co.	64
American Stove Co.	—
American Wood Register Co.	17
Arex Company	—

B

Berger Bros. Co.	55
Berger Mfg. Co., The.	55
Bernz Co., Otto.	—
Bertsch & Co.	55
Braden Mfg. Co.	—
Brillion Iron Works.	10
Bullard & Gormley Co.	64
Burgess Soldering Furnace Co.	—
Burton Co., W. J.	53

C

Callender Soldering Process Co.	66
Chicago Elbow Machine Co.	59
Chicago Solder Co.	55
Clark & Co., Geo. M.	—
Clark-Smith Hardware Co.	59
Clayton & Lambert Mfg. Co.	55
Cleveland Castings Pattern Co.	17
Clinton Metallic Paint Co.	—
Coes Wrench Co.	—
Copper-Clad Malleable Range	
Co.	—
Copper & Brass Research	
Association	—
Cortright Metal Roofing Co.	53
Cox Stove Co., Abram.	2

D

Dieckmann Co., Ferdinand.	—
Diener Mfg. Co., Geo. W.	—
Double Blast Mfg. Co.	—
Drels & Krump Mfg. Co.	57

E

Ewert & Kutschied Mfg. Co.	—
---------------------------------	---

F

Fanner Mfg. Co.	—
Farquhar Furnace Co.	—
Forest City Fdy. & Mfg. Co.	—
Forming Machine Corp.	57
Fox Furnace Co.	—
Friedley-Voshardt Co.	55

G

Gerock Bros. Mfg. Co.	—
Gohmann Bros. & Kahler.	16

H

Hall-Neal Furnace Co.	—
Harrington & King P'fg Co.	51
Hart & Cooley Co.	12
Haynes-Langenberg Mfg. Co.	—
Heller Bros.	64
Henry Furnace & Fdy. Co.	6
Hero Furnace Co.	5
Hess-Snyder Co.	11
Hessler Co., H. E.	59
Homer Furnace Co.	—
Hones, Inc., Chas. A.	—
Honeywell Heating Spec. Co.	—
Hussey & Co., C. G.	55
Hyfield Mfg. Co.	—

I

Independent Register & Mfg.	
Co.	—
Inland Steel Co.	53
International Heater Co.	—
Iwan Bros. Co.	—
Johnson Co., Inc., Chas.	—

K

Kant-Break Ladders, Inc.	—
Kirk-Latty Mfg. Co.	17
Kruse Co.	—

L

Lalance & Grosjean Mfg. Co.	—
Lamneck & Co., W. E.	13
Lennox Furnace Co.	—
Lovell Mfg. Co.	64
Lupton's Sons, David.	52

M

Machine Appliance Corp.	59
Majestic Co.	—
Malleable Iron Range Co.	—
Manrow Sheet Metal Works.	—
Manufacturers Brush Co., The.	61
Marshalltown Mfg. Co.	—
May-Fiebeger Co.	—
Merchant & Evans Co.	—
Meyer Furnace Co., The.	4
Meyer & Bros. Co., F.	14
Meyers Mfg. Co., Fred J.	—
Michigan Stove Co., The.	—
Miles Furnace Fan Co.	—
Milwaukee Corr. Co.	68
Monroe Fdy. & Furnace Co.	6
Moore Bros. Co.	20
Mt. Vernon Furn. & Mfg. Co.	11
Mueller Furnace Co., L. J.	18

N

National Institute of Account-	
ing, Inc.	59
New Jersey Zinc Co., The.	—
Northwestern Stove Repair Co.	—
Oakland Foundry Co.	—

O

Oliver Oil-Gas Burner Co.	8
Osborn Co., The J. M. & L. A.	51

P

Peck, H. E.	66
Peck, Stow and Wilcox Co.	57
Penn. & Atlantic Seaboard	
Hdw. Assn., Inc.	—
Phillips & Buttorff Mfg. Co.	5
Premier Warm Air Heater Co.	—

Q

Quick Furnace & Supply Co.	—
Quick Meal Stove Co.	—
Quincy Pattern Co.	17

R

Rock Island Register Co.	—
Roesch Enamel Range Co.	16
Ross-Gould	—

S

Scheible-Moncrief Heater Co.	—
Schill Bros. Co., The.	11
Schwab & Sons Co., R. J.	—
Special Chemicals Co.	—
Standard Furn. & Supply Co.	—
Standard Ventilator Co.	55
Stearns Register Co.	10
St. Clair Foundry Corp.	10
St. Louis Tech. Inst.	—
Stove Dealers Supply Co.	17
Sullivan-Geiger Co.	—

T

Taylor Co., N. & G.	—
Thatcher Furnace Co.	9
Tuttle & Bailey Mfg. Co.	15

U

Utica Heater Co.	3
-----------------------	---

V

Vedder Pattern Works.	17
Viking Shear Co.	59

W

Walworth Run Fdy. Co.	15
Waterloo Register Co.	17
Waterman-Waterbury Co.	7
Whitney Mfg. Co., W. A.	61
Whitney Metal Tool Co.	57
Wise Furnace Co.	7